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The American Medical Association has reached an age when the thoughts of one whose retrospections extend to its birth, naturally revert to the natal period of its existence. Of those who coöperated in the formation of the Association, not many now remain, and after a few more annual meetings all will have passed away.

Thirty-eight years ago, a medical convention was held in the city of New York, in compliance with a recommendation by the Medical Society of the State of New York, in 1845. In 1839, the Medical Society of the State of New York adopted a resolution recommending a national convention to be held in Philadelphia in 1840. This action of the society was without effect. In connection with the recommendatory resolution adopted in 1845, a committee of three was appointed to carry the resolution into effect, and the mover of the resolution, Dr. N. S. Davis, was made chairman of that committee. Thanks to his zeal and energy, at the time and place designated by the Medical Society of the State of New York, the convention was held, and attended by about one hundred delegates, representing medical colleges and societies in sixteen States of the Union. I can bear testimony from personal recollection to the enthusiasm which characterized that convention. The convention resolved that it was expedient to form a National Medical Association, and a committee of seven was appointed to report a plan of organization at a second convention, to be held in Philadelphia in May, 1847. A committee of seven was to report, at the same time and place, a uniform and elevated standard of requirements for the degree of M.D. Another committee of seven was appointed to report on a suitable preliminary education for the study of medicine; and a committee of seven was appointed to report a code of medical ethics.

At the convention held in Philadelphia in May, 1847, there were present 250 delegates, 40 medical societies, 28 medical colleges, 22 States of the Union, and the District of Columbia being represented. I can testify to an enthusiasm even greater than at the first convention. Resolutions reported by the several committees appointed at the New York convention were adopted. These resolutions embraced a plan of organization, a constitution and by-laws, together with the now existing Code of Medical Ethics, and the convention was merged into the American Medical Association. Thus, the birth of the Association was in 1847, and it therefore now enters upon the 38th year of its existence.[1]

What motives led to the formation of the Association? First and most prominent was a desire to promote improvements in medical instruction, and to advance the standard of professional acquirements. These were the aims stated in the call for the first convention. A more comprehensive statement was expressed in the first of a series of resolutions proposed by Alfred Stillé, and offered by Isaac Hays, as follows: "It is expedient for the medical profession of the United States to institute a National Medical Association, for the protection of their interests, for the maintenance of their honor and respectability, for the advancement of their knowledge, and the extension of their usefulness." It had become evident that for the ends expressed in this resolution the profession in this country must rely mainly on itself. Little was to be expected from State Legislatures. These bodies then, as now, were indisposed to legislate in behalf of medical education, except to charter new colleges; they were even reluctant to legalize dissections. They had not then, nor have they since the formation of the Association, recognized the promotion and diffusion of medical knowledge as legitimate objects for ample appropriations of public funds; as a rule, so far as legalized protection, sanction, and encouragement go, they have been not less considerate of irregular than of regular medical practice, and indeed, the terms regular and irregular denote a purely professional, not a legal, distinction. The State of New York, at the time of the first convention, had virtually admitted the right of any one to practice medicine; in few, if any, of the States of the Union were there legal restrictions, and in some there were no laws whatever relating to medical practitioners. Nor was much to be expected then, as now, from individuals outside of the profession. Liberality, philanthropy, and public spirit had not, and as yet has not, except in rare instances, taken a direction toward medical instruction and the advancement

[1] The annual meetings were suspended from 1860 to 1863, that is, for the years 1861 and 1862. The suspension of the meetings for these two years was owing to the civil war. It is worthy of note that the Medical Society of the State of New York, in February, 1863, adopted unanimously a resolution in favor of resuming regular annual meetings of the Association.

of medical knowledge. A conviction of the necessity for self-reliance, and a deep sense of the importance of the ends set forth in the resolution which I have quoted—these were the main-springs in the movement which resulted in the organization of the American Medical Association. The need for uniting in council members of the profession from all parts of the country, was widely felt. The feeling was catholic, not sectional. The ends had reference not to a single State, but to the United States. When Davis introduced his resolutions, at the meeting of the Medical Society of the State of New York, in 1845, the "fullness of the time had come," and in the providential order of human events, the American Medical Association came into existence. Its development and growth were rapid. It has now passed through a healthful adolescence into a mature age. It has outlived and profited by the errors and imperfections incident to youth. We have before us to-day the proof that it is replete with vitality and vigor.

I have not indulged in these reminiscences of the origin of the Association, with the intention to revive its subsequent history. As furnishing appropriate topics for my discourse on this occasion, I take for my text the preamble to the plan of organization, adopted at the formation of the Association. This preamble is as follows:

"WHEREAS, The medical convention held in the city of New York, in May, 1846, have declared it expedient for the medical profession of the United States to institute a National Medical Association; and inasmuch as an institution so conducted as to give frequent, united and emphatic expression to the news and aims of the medical profession in this country, must at all times have a beneficial influence, and supply more efficient means than have hitherto been available here, for cultivating and advancing medical knowledge; for elevating the standard of medical education; for promoting the usefulness, honor and interests of the medical profession; for enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those who are engaged in it; therefore, *be it resolved*, in behalf of the medical profession of the United States, that the members of the medical convention held in Philadelphia in May, 1847, and all others who, in pursuance of the objects above mentioned, are to unite with, or succeed them, constitute a National Medical Association."

The objects of the Association are here clearly and tersely set forth. My remarks will have reference to those objects. The topics which, in connection therewith, suggest themselves, are so many and large, that, with a due regard to the length of my discourse, not a few must be omitted, and none can be fully considered.

The terms "cultivating and advancing medical knowledge," by which the first object is expressed in the preamble, imply that medicine is progressive. No one of those whom I address will deny the assertion that medicine is now progressing as it has progressed in the past, and that it will continue to progress in the future. I do not doubt that the present stage of its progress will hereafter be cited as an important epoch in its history. For the past quarter of a century, histological and clinical studies have tended to develop more and more our knowledge of the existence of specific agents in the causation of diseases. That, as regards certain diseases, these specific agents are micro-organisms, has been demonstrated. The latest discovery in this direction is that of the bacillus tuberculosis, a discovery which is the leading topic in medical literature at the present time. Recent trustworthy researches go far toward demonstrating the existence of specific organisms in pneumonia, typhoid fever, malarial fever, and epidemic cholera; and, reasoning by analogy, it is a logical conclusion that ere long a host of diseases will be proven to be parasitic. It is easy to perceive how important must be the bearings of these developments in ætiology and pathology on prophylaxis and therapeutics. A new era is about to be inaugurated in these practical departments of medicine. Professor Huxley, in his address at the International Medical Congress in 1881, uttered a prediction in these words: "It will become possible to introduce into the economy a molecular mechanism, which, like a very cunningly contrived torpedo, will find its way to some particular group of living element, and cause an explosion among them, leaving the rest untouched." I would rather say that the time will come when means will be found to destroy morbific agents outside of the body, thereby securing the prevention of diseases; and that means will be found to effect the destruction of these agents within the body, thereby arresting the course of diseases. Let us hope that the medical profession in this country will take an honorable part in the labors for the cultivation and advancement of medical knowledge with reference to these most desirable results! At all events, let us continue to recognize and apply medical knowledge, wherever it may originate!

"For elevating the standard of medical education;" these terms express the second of the objects enumerated in the preamble. At the first convention, held in 1846, a committee was appointed to report on "a uniform and elevated standard of requirements for the degree of M.D., to be adopted by all the medical schools in the United States." Another committee, at the same convention, was appointed to report on the "standard of acquirements which should be expected of young men before being received as students of medicine." These committees, at the second convention, in 1847, submitted reports which were adopted. Now, it has been charged upon the Association that its recommendations in regard to medical education have been nugatory. If, however, the recommendations embraced in these reports be referred to, it will be seen that there is less room for reproach than some may have supposed.

The committee on the requirements for the degree of M.D. reported in substance as follows: That the college terms be extended from four to six months; that candidates for the degree of M.D. shall have

attended two full courses of lectures before graduation; that three years should be devoted to the study of medicine; that a certificate of pupilage by a preceptor who is avowedly and notoriously an irregular practitioner should not be accepted; that the number of professors in medical schools be increased to seven; that candidates shall have devoted three months to dissections; that preceptors should avail themselves of every opportunity to impart clinical instruction to their pupils.

It would be absurd for the Association to renew these recommendations at the present time. The progressive advancement in medical instruction in most of our colleges has long since gone far beyond them. It is not to be doubted that the Association exerted not an inconsiderable influence in the progress which has been made in medical instruction. That there is room for further advancement, no one will deny, and it is certain that it will continue in the future as in the past, albeit not, perhaps, with a celerity to satisfy those who seem to derive gratification from the disparagement of medical education in this country. Improvements which, although steadily progressing, are to be promoted, relate to a closer union of didactic with clinical teaching, and especially to practical exercises in the investigation of cases of disease; to increased demonstrative instruction in special branches of medicine, such as histology, the microscopical and chemical examinations of morbid products, together with the fluids of the body in health as well as in disease; the physical exploration of the lungs, heart, and other organs, etc.; to a larger allowance of time, in connection with oral teaching for recitations; to the substitution of recitations, to a greater or less extent, for didactic lectures in certain departments; and to an extension of the period of medical pupilage.

The educational advantages, exclusive of those relating to college sessions, although vastly better now than heretofore, may be much extended and made more available than at present. The pupils who, between college sessions, study in the offices of medical practitioners in the country, reading such books as they find in the meager and perhaps antiquated libraries of their preceptors, accompanying the latter in their "rides," preparing medicines and making themselves generally useful, may undoubtedly pick up many facts and ideas which will become useful in after life; but it hardly requires argument to show that systematic private instruction is much to be preferred. Moreover, methodical reading and recitations are essential, not only for the information thereby obtained, but in order that the pupil may acquire, if it have not been already acquired, what may be called the art of study. There are those who, having obtained their medical education chiefly from oral teaching and demonstrations, cannot apply the mind to study by means of books, although not indifferent to the knowledge to be thus obtained, for the simple reason that they lack the ability to be acquired only by practical training.

At the present time, the most important of the means for elevating the standard of medical education, relate to the preliminary requisites for the study of medicine. The committee appointed in 1846 to report on this subject, recommended that members of the medical profession throughout the United States should satisfy themselves, before receiving young men as students, that they have acquired "a good education, a knowledge of natural philosophy and the elementary mathematical sciences, including geometry and algebra, and such an acquaintance at least, with the Latin and Greek languages, as will enable them to appreciate the technical language of medicine, and read and write prescriptions." It was also recommended that the medical colleges require a certificate of such an amount of preliminary acquirements before matriculation.

These requisites are, assuredly, neither in number nor degree, unreasonable. The need of any knowledge of the dead languages has been doubted; but when it is considered that the names of all the organs and tissues in the body, and the nomenclature of diseases, together with terms used in physiology, chemistry, materia medica, pharmacy, surgery and obstetrics, are of either Greek or Latin derivation, it is difficult to understand how the student can dispense altogether with this knowledge. The want of it must, to say the least, be a great drawback. A thorough acquaintance with these languages, philologically, or with reference to an appreciation of the literature of Greece and Rome, however elegant as an accomplishment, is by no means essential as preparatory for the study of medicine, and it may fairly be questioned whether the time usually spent in the study of the Greek and Latin authors by those who graduate in arts at our colleges, might not be given with much more profit to physics, chemistry, and the French and German languages. To the requisites recommended by the Association might be added, with advantage, knowledge of the elements of chemistry, leaving only the practical applications of this science in the different departments of medicine to be taught in our medical schools.

It must be confessed that the progress in the matter of the preliminary education of medical students, is less satisfactory than that in medical instruction. Not a few medical students are deficient in the knowledge and the mental training requisite as preparatory for the study of medicine. The fault, exclusive of the students themselves, lies in part with the medical schools, and partly with private preceptors; more with the latter than the former, inasmuch as to them, generally, applications are first made to enter upon the study. I have no wish to be an apologizer for either; there is blame on both sides, and there should be mutual coöperation in an effort to remove the greatest of the present obstacles in the way of elevating the standard of medical education.

The practical question is, what can the Association do to promote more and more the elevation of the standard of medical education? I will meet this question, in the first place, by suggesting what it is desirable should not be done.

It is not judicious to decry medical education in this country as unworthy of any commendation, and as contemptible when contrasted with the educational advantages of other countries. The low estimate in

which medical education in America appears to be held by some of our writers, is not only discouraging, but it is without any warrant from facts. Our methods of teaching have certain notable advantages above those of other countries; and in respect of effectiveness in practical branches, we have no occasion to be ashamed if comparisons be fairly made.

It is alike impolitic and unjust to depreciate, as is sometimes done in offensive terms, the medical profession of the United States. As a body, the members of our profession in this country are neither ignorant nor in any respect unworthy. The profession is honorable and honored. In no other country is the social status of its members higher. If a distinction be not always drawn, in public estimation, between true merit and either pretentious ignorance or fraudulent assumption, this is an evil by no means confined to our country; it is incident to the peculiar character of medical knowledge and to human credulity. Granting the need of a better average of professional acquirements, it is not to be effected by abuse of the profession as a whole.

Sweeping charges against medical schools of venality and deception, are not less unwise than unbecoming. As regards their maintenance, the condition of the medical schools in this country, when compared with those of other countries, is anomalous. For the most part they are unendowed, and therefore must be self-sustaining. If they cannot offer adequate inducements for patronage, they cannot exist. This condition has its advantages, but also its drawbacks. There is but little ground for the accusation of resorting to dishonorable methods to secure patronage. I may venture to assume some degree of competency to speak with confidence in regard to this matter, it having fallen to my lot to have been connected with several medical colleges, and I aver my belief that the endeavor to entice students by an expectation of easy graduation, or by any other disreputable inducements, must be rare exceptions to the rule. Granting that there are exceptions, and that some colleges may be guilty of flagrant abuses of their chartered rights, is it not more just, and in all respects better, to pursue measures for the extinction of their rights, as for rendering their degrees nugatory, than to make the evil doings of a few the ground for indiscriminate abuse, embracing colleges which are striving to do their duty to their pupils, to the medical profession and to the public?

It is injurious and an injustice to assert, as is often done, that a large proportion of those pursuing the study of medicine in this country, are governed by a desire to gain admission to the profession as quickly, as cheaply, and with as little medical knowledge as will suffice for that object. Here it may not be too presuming in me to speak with some authority, having, as a teacher for forty years, been brought into relations with many thousand medical students from the Northern, Southern, Eastern and Western States of the Union. As a class, they will compare favorably with those preparing for the sister profession or for any of the callings of life. A large proportion evince a degree of diligence and perseverance not excelled, as I believe, in any other country. I rejoice in the present opportunity to bear this testimony, based on personal knowledge, in behalf of the much and undeservedly abused American medical student.

Elevation of the standard of medical education is not to be promoted by means such as have just been adverted to. Vituperation does not supply motives for improvement. Reforms are not favored by obloquy. He who is content to do battle with the sword of ridicule, has not the spirit of a true reformer. I have no disposition to deny or to take the attitude of an apologist for defects and abuses which affect, directly or indirectly, the standard of medical education. Some of the evils most complained of might be obviated by the united action of the members of the medical profession. Much is said respecting the overcrowding of the profession by the large number of annual graduates, and this evil is attributed to the number of medical colleges. Assuming for the nonce, the fact, together with the explanation, and that the evils overbalance the advantages of an active competition among the colleges, how is the number of these to be reduced? Reliance on State legislators are likely to take away charters which have been granted, and they will probably continue to be complaisant enough to grant new charters to persistent applicants. But suppose all private preceptors were to induce their pupils not to connect themselves with colleges which are either misplaced or deficient in the means of instruction; a certain number would cease to exist, and the result would exemplify the Darwinian doctrine of the "survival of the fittest."

Again, suppose private preceptors throughout the United States were to unite in declining to either receive as pupils, or to advise entering on the study of medicine, all who lack the proper requirements, the evil of the deficiency in preliminary education would be at once removed.

I revert to the question, "What can our Association do to promote more and more the elevation of the standard of medical education?" It is to be borne in mind that, exclusive of the motives for personal improvement which appeal to its members individually, the profession must rely upon itself for whatever is to be done. The American Medical Association represents the profession of the whole country. Hitherto the Association has been content with reports, addresses, and communications pointing out existing defects in medical education, and recommending changes and improvements, the immediate adoption of some of which was impracticable. Too often a predominant spirit of animadversion has been apparent. Let a course be pursued which is more active and practical, with reference to measures for progress. Let certain measures be proposed for immediate adoption, which are within the limits of practicability. Let these measures receive the sanction and support of local Associations in the different States of the Union. Let the National Association take the initial steps and solicit conferences with, and the coöperation of, State Associations and the leading medical colleges throughout the country, with a view to agreement respecting the proposed definite measures. Let these steps be taken in a kindly spirit, with an earnest desire to harmonize different views and

interests, in order that there may be united action as regards improvements agreed upon. In this way, as we may hope, uniformity in the different States will be secured in behalf of the second of the objects for which our Association was instituted. There can be but little difference of opinion as to improvements in medical education which it is desirable should be effected; the opposing difficulties are chiefly those which interfere with uniformity throughout the United States. I venture to suggest the appointment of a standing committee on medical education, with a view especially, by means of communications with State Associations and colleges, to secure uniform action with reference to requirements for matriculation and for graduation. My purpose in the suggestion of such a committee, is not to obtain reiterated resolutions setting forth what ought to be done, but reports, at the next meeting and at subsequent meetings of the Association, of what has been actually accomplished. It is not to be expected that all desirable improvements will be at once effected. Considering the greater relative importance of preliminary requisites for the study of medicine, were these made the first objective point in the action of the committee with a satisfactory result, a very important advance would be made, and this would be likely to prove an earnest of success in effecting other improvements.

A plan for the elevation of the standard of medical education, which has been recommended by the Association, consists in making the degree of M.D. purely an honorary distinction, not rendering the graduate thereby legally qualified to practice, this qualification to be derived from a licensing board composed of examiners not engaged in medical teaching. Of this plan I forego discussion, for the reason that it would exclude the consideration of topics which seem to me more important. With no disposition to undervalue its recommendations, I will simply remark that, aside from certain intrinsic objectionable features, it is open to objection on the ground of the impracticability of securing uniformity in the different States of the Union, and because it contravenes the principle of self-reliance in matters relating to our profession.

In the language of the preamble, the third object of our Association is "for promoting the usefulness, honor, and interests of the medical profession."

I shall confine my remarks on this object to a topic which is, perhaps, at the present time, the most important as bearing upon it. I refer to medical ethics. I need not undertake to represent to this audience how manifold, delicate, and peculiar are the professional duties and relations of the medical practitioner. There is no other calling in which so much depends on the conscientiousness and uprightness of those who practice it. There is no calling in which the temptations and opportunities for deviations from rectitude are so great. In the enumeration of the attributes of the physician by Hippocrates, with "learning and sagacity" were conjoined "humanity and probity."

In order to practice medicine with proper self-respect, the practitioner must himself honor the profession, and in order that medical services shall be properly respected, the profession must be honored in public estimation. The duties incident to medical practice are often of a nature to render them menial and degrading, were they not required by a humane and honorable calling. Some one has said, with truth, that while medicine is a noble profession, it is the meanest of trades. Imbued with these sentiments, the founders of our Association, at the convention in 1846, resolved—"That it is expedient that the medical profession in the United States should be governed by the same code of medical ethics, and that a committee of seven be appointed to report a code for that purpose." A committee appointed in accordance with this resolution reported a Code of Ethics at the convention held in Philadelphia in 1847. This Code was adopted by the American Medical Association without a dissenting voice. It has remained essentially intact up to the present time, and it has been adopted by medical societies throughout the United States.

It were gratuitous to expatiate on the excellence of this Code. It speaks for itself better than any one can speak in its behalf. It has exerted a most salutary influence on the minds of the members of the medical profession in the country. It has promoted love of the profession, and self-respect as members of it, thereby contributing to its usefulness, its honor, and its true interests. I believe that a former President of this Association, Dr. N. S. Davis, uttered a correct statement in saying that in no other country are the principles and rules of medical ethics better observed than by the majority of the members of the profession in the United States,[1] and it is a reasonable conclusion that this is owing in a great measure to the influence of the national Code on the minds of the practitioners of medicine in our country. I concur with the speaker who addressed the Association from this chair, in 1882, Dr. Hooper, in the opinion that the American Medical Association, had it done nothing else than to adopt the Code of Ethics, would have been entitled to unending gratitude. I cannot forbear quoting some extracts from the address of a distinguished predecessor, the late Professor George B. Wood, in 1856: "A great benefit conferred on the profession by the Association was the preparation and adoption of the Code of Ethics." * * * * "I have no doubt that a full observance of its rules would tend more than any one thing else to maintain harmony in the profession and to elevate it in the public esteem." * * * * "I do honestly believe that to a young physician going forth into a life full of moral conflicts, the wearing of this ægis would be one of his surest defences; that next to the holy Scriptures and the grace of God, it would serve most effectually to guard him from evil."

It is only within a recent period that there have been anywhere manifestations of a disposition to change materially our National Code of Ethics, or to do away with any code. In 1882, at the annual meeting of the New York Medical Society, by a vote of 52 of 70 members in attendance at the meeting, a new code was summarily substituted for the Code

[1] Address at the Convention of Medical Editors, 1883.

of the American Medical Association. This precipitate and lamentable action has severed the New York State Society from its affiliation with our Association, and has resulted in a division of the members of the profession in the State of New York. That these results may not be permanent, must be the fervent wish of all who have at heart the usefulness, honor and interests of the medical profession.

Some of the recent opponents of our National Code object to it as antiquated, quaint, and containing useless platitudes. These objections do not call for serious refutation. They involve merely a question of taste, and the characteristics which by some are considered as blemishes, have for others a peculiar charm. Admitting that certain of the precepts of the Code are supererogatory, no one can object to them on the ground that they do harm, and if they be acceptable even to a few, wherefore should they be opposed by any?

Other objections are that the Code has, to a greater or less extent, proved inoperative, and that its rules are not enforced by means of penalties for the non-observance of them. The Code itself contains nothing in regard to penalties, nor do the By-laws of the Association take cognizance of these except to exclude from representation local societies which have not adopted the Code, "or which have intentionally violated or disregarded any of its articles or clauses." With this exception, the enforcement of ethical rules is left entirely to local societies. The fault, if fault there be, lies at the door of the latter. But, granting the fault to be ever so great and widely extended, is this a valid reason for formally repudiating obligations which are morally binding? Are the principles of morality pertaining to any of the duties of life to be ignored because immorality prevails? Are penal laws to be erased from the statutes because punishment often does not follow crime? Although few, if any, live up to the scriptural injunction to "do unto others as you would that they should do unto you," is this quintessence of religious duty to be expunged from Holy Writ? It is the salutary influence on the minds of members of the profession, in which consists the greatest potency of the ethical code for good; and I will go so far as to say that the Code were invaluable, were no penalties incurred by violations of it beyond those pertaining to the conscience of offenders.

The portion of the Code which is especially objected to, is that relating to consultations with irregular practitioners. The advocates of the "new code," so-called, in the State of New York, would permit consultations with all legally qualified practitioners of medicine. The advocates of "no code" would leave it entirely to individual judgment to decide with whom members of the medical profession should meet in consultation. After quoting the portion of the Code relating to this topic, I will ask your consideration of the views which I shall offer. The following is the article of the Code referred to: "A regular medical education furnishes the only presumptive evidence of professional abilities and acquirements, and ought to be the only acknowledged right of an individual to the exercise and honors of his profession. Nevertheless, as in consultations the good of the patient is the sole object in view, and this is often dependent on personal confidence, no intelligent regular practitioner who has a license to practice from some medical board of known and acknowledged respectability recognized by this Association, and who is in good moral and professional standing in the place in which he resides, should be fastidiously excluded from fellowship, or his aid refused in consultation, when it is requested by the patient. But no one can be considered as a regular practitioner or a fit associate in consultation, whose practice is based on an exclusive dogma, to the rejection of the accumulated experience of the profession, and of the aids actually furnished by anatomy, physiology, pathology, and organic chemistry."

The excluding clause, which is the last sentence, specifies who is not to be considered as a regular practitioner. No one, surely, will deny that a practitioner such as is specified in that clause, cannot be considered as a regular practitioner. The article does not assume to embrace a comprehensive definition of irregular practitioners. At the time when the Code of Ethics was adopted, the great majority of irregular practitioners were men who not only based their practice on an exclusive dogma, but made no concealment of their rejection of the "aids actually furnished by anatomy, physiology, pathology and animal chemistry." They made no pretension to knowledge of these branches of medicine, and they scornfully repudiated the "accumulated experience of the profession." The language of the article, which applied well enough to most of the irregular practitioners at that time, is not as applicable to those of a later date. It is not affirmed in the wording of the Code that holding an exclusive dogma is in itself sufficient for a practitioner to be considered as irregular. The language which refers to an exclusive dogma is to be taken in connection with the remainder of the same sentence. Exclusive dogmas have prevailed, to a greater or less extent, in past time, among members of the regular medical profession. Legitimate medicine places no restrictions on individual opinions; it does not assume to interfere with the utmost freedom in this regard. What is it, then, irrespective of a "rejection of the accumulated experience of the profession, and the aids actually furnished by anatomy, physiology, pathology and organic chemistry," which stamps irregular practitioners? Is it not the assumption of a distinctive name, such as homœopathic, eclectic, botanic, etc., voluntarily assumed as an announcement to the public of the adoption of a system of medicine distinct from, and opposed to, the practice of the regular profession, and on this distinction and opposition basing their claims as practitioners?

In order to make my meaning clear, let me illustrate it by examples. Within the recollection of those who have been in the profession for more than half a century, there prevailed simultaneously, for a time, two dogmas quite opposite in character, each having its ardent partisans. I refer to Broussaism and Brunonianism. Broussais and Brown were men of genius and learning, led astray by specious theo-

ries. They were honest in their opinions, and they sought to convince members of the profession, not the public, of the truth of their dogmas. Their partisans were often called Broussaists and Brunoiners; but they never assumed these names as sectarian designations. Now, had they assumed these names, making themselves known to the public as practicing Broussaism or Brunonianism, and on this ground basing their claims for practice, they would have been irregular practitioners not entitled to professional fellowship. As it was, they were not without the pale of the regular profession.

As a hypothetical example, *per contra*, suppose a graduate from a medical college of acknowledged respectability, whose professional attainments are sufficient to qualify him for membership of the regular profession, has adopted a sectarian name and allied himself with those who profess antagonism to legitimate medicine. He is, therefore, an irregular practitioner, whatever may be the particular tenet which is ostensibly the basis of his practice.

Let it be supposed that such a practitioner is desirous of being enrolled in the ranks of the regular profession. I need not say that this profession has no creed, no articles of faith, no traditional doctrines, which it imposes as conditions for membership. It enjoins no limitations of private opinion, it matters not how fantastic. In order that such an irregular practitioner as has been represented may enter the regular profession, no relinquishment of honest convictions is essential. In addition to educational and moral qualifications, the renouncement of a sectarian designation and of the hostility to the profession thereby involved, and conformity to the rules of medical ethics, are alone necessary. It is a calumny to say that persons are excluded from the medical profession on account of peculiar views, however irrational, and that conversion and recantation are essential for professional fellowship. The doors are closed to no one who has received a regular medical education, and whose conduct is governed by the rules of medical ethics.

It might prove a hazardous experiment to tamper with a Code of Ethics so complete and perfect as our national Code, and which has stood so well the test of time. Daniel Webster was accustomed to stigmatize efforts to amend the Constitution of the United States, or "attempts to tinker the Constitution." This pithy saying might be applied to propositions for altering our ethical Code. But it is safe and reasonable for interpretations of the Code to be authorized from time to time, in adaptation to circumstances as they arise; and I submit, as a recommendation, that the Association adopt resolutions embodying a more precise specification than the Code furnishes, of the grounds for refusing fellowship with irregular practitioners. This recommendation is in accordance with precedents. At the annual meeting in 1869, the Association adopted a resolution which recognized "specialties as proper and legitimate fields of practice." Herein was an authorized interpretation of the Code in adaptation to new circumstances. It was also resolved not to be "proper for specialists publicly to advertise themselves as such, or to assume a title not specially granted by a regularly chartered college." If there be the least room for uncertainty, let it be specified distinctly that the adoption of a sectarian title is not merely a violation of medical ethics, but a voluntary disconnection from the regular medical profession, and that professional fellowship is thereby not only inconsistent with self-respect, but prejudicial to the usefulness, the honor and the true interests of the profession.

I believe I do not err in saying that those objections made to the Code of Ethics which call for serious consideration, betoken either an inadequate appreciation or an erroneous construction of the Code, and therefore such objections can be removed by authorized interpretations, which being simply explanatory, without involving essential changes in the Code, are not subject to the provisions for amendments of articles embraced in the Constitution and By-laws of the Association.

I must pass cursorily over the remaining objects for which, as enumerated in the preamble to the plan of organization, our Association was instituted. The means for "enlightening and directing public opinion in regard to the duties, responsibilities and requirements of medical men; for exciting and encouraging emulation and concert of action in the profession, and for facilitating and fostering friendly intercourse between those engaged in it," furnish many topics which, if time permitted, would claim consideration.

Every member of our profession is often made painfully aware, not only of apathy but misapprehension, in the public mind, as regards our duties, responsibilities and requirements. The popular diffusion of our Code of Ethics, allowing it to speak for itself, would go far toward the removal of many errors in regard to our profession. A valuable service, not less to the public than to the profession, might be rendered by proper efforts in this direction. In this way the public may perhaps be led to understand and appreciate the rules of etiquette for which we are often held up to ridicule; our opposition to secret nostrums, and patented discoveries and improvements, and our refusal of fellowship with irregular practitioners. Recurring to the last named topic, many suppose that fellowship with those who are not of the regular profession is refused either from a false sense of dignity or from prejudice, regardless of the dictates of humanity. Now, the ethical code neither in letter nor spirit inculcates nothing in conflict with the humane exercise of our calling. This is a superfluous assertion to those familiar with the teachings of the Code. The principle of humanity underlies all its practical precepts. Quoting words which have been already quoted, "The good of the patient is the sole object in view." There are circumstances under which the higher law of philanthropy, placing in abeyance those rules of the ethical code, as well as of etiquette, which under other circumstances claim obedience, not only permits but commands members of the regular profession to bestow their professional services without stopping to ask whether a practitioner with whom chance has brought

them into association be, or be not, a "fit associate in consultation." Under such circumstances, association with an irregular practitioner, governed by a supreme regard for humanity, involves neither fellowship nor professional application, and it is to these alone that ethical restrictions apply. Let it not be conceded for an instant that there can be any antagonism between humanity and medical ethics. Nor is it difficult in particular instances to decide, practically, in what way the dictates of humanity are to be harmonized with ethical rules. Regarded in the light derived from both these sources, the path of duty is sufficiently plain. Any act honestly performed purely for a humane purpose, cannot but be consistent with the principle which underlies our admirable Code of Ethics. But it is to be added, professional association with those who, in the language of the Code, are not "fit associates in consultations" except in emergencies when philanthropy, for the time being, abolishes all restrictions, contravenes the humane objects of our profession just so far as the useful applications of legitimate medicine are thereby trammelled or curtailed. If it be inhuman under certain circumstances to decline association with irregular practitioners, it would be equally or more so, under other circumstances, to make those concessions which professional fellowship requires to practitioners who profess hostility to medical science and to the regular medical profession. The refusal of fellowship and affiliation with irregular practitioners, thus, is sanctioned, not only by a sentiment of self-respect, and respect for our profession, but by a proper regard for the dictates of humanity.

The work in the several Sections of our Association is of importance, aside from its intrinsic value as a means for "exciting and encouraging emulation and concert of action in the profession." Now that whatever is here done is speedily laid before the profession through the medium of the weekly journal, it is to be hoped that there will be a larger attendance and greater activity at the meetings of the Sections than hitherto. It is here that efforts are to be made for the advancement and diffusion of medical knowledge. On the results thereof must be based the estimation in our own country of the usefulness of the Association, and its rank as compared with sister associations in other countries. In short, we shall contribute to the true success of the Association, as we increase by our attendance and coöperation the value of the sectional work.

Our Association, both by precept and example, has aimed to facilitate and foster friendly intercourse between those engaged in the practice of medicine. The opportunities for the renewal of old and the formation of new friendships, and for social enjoyment are, in themselves, sufficient to render the meetings of the Association of great value. Let us continue to cherish this last one of the several objects for which our Association was instituted, so that, in this point of view, to the enjoyment of its meetings, may be added the pleasures of anticipation and of retrospection.

Our efforts to facilitate and foster friendly intercourse between members of the medical profession, as well as to promote the development and diffusion of medical knowledge, should not be limited to our own country. As the means of union for these objects of the medical profession of all countries, the meetings of the International Medical Congress claim a warm interest. The meeting of the Congress in London, in 1881, will ever be memorable in the retrospections of its members, and they who expect to attend the meeting at Copenhagen in August next, may anticipate much enjoyment as well as improvement. It would prove, as I doubt not, a source of great gratification to the profession of our country if the meeting of the Congress in 1887 were to be held in the United States, and I suggest the propriety of action to be taken now with reference to this desirable end. Inasmuch as an invitation should be in behalf of the profession of the whole country, and not of any particular section, it appropriately should come from the American Medical Association. If the suggestion be favorably received, it seems to me advisable that a committee be appointed with instructions to convey an invitation from this Association through its delegates to the Congress at Copenhagen. The committee may also be empowered to designate the time and place of the meeting of the Congress in 1887, and to take such other preliminary steps as may appear to the committee to be requisite.

My suggestion in regard to the International Congress is not made solely on my own responsibility, but at the instance of several well-known for their active interest in the welfare of the American medical profession. By one of the most eminent of these, I was requested, quite recently, to make the suggestion, in a letter written with a hand tremulous from the serious illness which has deprived the Association of his presence at this meeting; one whose absence is a disappointment to many who were desirous to behold once more the genial, benignant countenance which has hitherto greeted us at our annual meetings; one whose writings have made American surgery illustrious, who is revered by the many thousand practitioners who have listened to his instructions, and who is honored, not only in our own country, but in other countries, as no member of the medical profession in America was ever before honored; one admired by all who have known him, and beloved by those who have enjoyed the privilege of his friendship. I know that I speak the heartfelt sentiment of every one who hears me, and of our brethren throughout the whole country, when I address a fervent wish that Prof. Samuel D. Gross might be spared yet many years to his family, his friends, and the profession which he adorns.

Brethren of the American Medical Association:

I congratulate you on your presence at this annual meeting. It is peculiarly gratifying to meet together in this city, the Capitol of our Government, in which there is so much of interest to us as American citizens. There is also much that is attractive in a professional view. We have the opportunity of forming and renewing acquaintance with the eminent members of our profession residing in this city and vicinity. Here is the Army Medical Museum, the

largest and most complete collection in existence of the results of gunshot injuries and of the diseases of armies. It is rich in illustrations of craniology and comparative osteology; and its specimens cover the whole field of medicine and surgery. Here is also the National Medical Library, the largest exclusively medical library in the world, and, as a practical working library, the most valuable, owing to its immense collection of periodical literature, and the manner in which it has been indexed and catalogued. All praise and honor to the medical officers connected with the office of the Surgeon-General, to whom our profession and the country are indebted for the labor and skill that have made our National Medical Library and the Army Museum institutions of which we may justly be proud! Let us hope that Congress will not much longer delay in providing a commodious fire-proof building for the reception of the valuable collections which it would be impossible to replace, and which are of the greatest importance to the progress of medical science and education in this country.

The Naval Museum of Hygiene, although of recent growth, will be found to possess an interesting collection illustrating sanitary science, together with a good library. The National Museum and the Museum of the Department of Agriculture contain also much that is of interest to members of our profession.

To my congratulations are to be added my thanks for the great honor conferred on me by my election to the Presidency of the Association. My grateful appreciation of the honor is enhanced by the fact that I did not seek nor desire the office. I should have been glad had the selection fallen on one better prepared to perform the duties of a presiding officer. I can only say that, relying on your indulgence and forbearance, I shall discharge these duties to the best of my ability.

May this thirty-fifth annual meeting of the Association be characterized by harmony and good feeling! With the blessing of Providence, may its proceedings strengthen the attachment of the American medical profession to the Association, extend the boundaries of our knowledge, and promote the welfare of mankind!

ADDRESS ON PRACTICAL MEDICINE.

BY JOHN V. SHOEMAKER, M.D., CHAIRMAN OF THE SECTION ON PRACTICAL MEDICINE AND MATERIA MEDICA, MAY, 1884.

Gentlemen of the American Medical Association:

A year ago you conferred upon me the honorable position of Chairman of the Section of the Practice of Medicine, Materia Medica, and Physiology of your Society. As Chairman, it is made imperative upon me, by our By-laws, to lay before you a *résumé* of the progress made and the new discoveries announced in these branches of our science during the past year. The responsibility of this duty, in view of the numerous investigations and important discoveries by the members of the medical profession throughout the civilized world, and the steadily increasing volume of medical literature, etc., renders the task more and more difficult with each succeeding year; for as new theories arise and supplant older ones, they, in turn, will be superseded by others yet unheralded. The unbiased gleaning of what has been done is a feat of no mean proportion, and if I should not do full justice in my criticism of any particular one, or in the mention of others, I beg your indulgence in advance.

Medicine, at the present time, has a tendency to elevate itself beyond the narrow sphere occupied by it years ago. Empiricism is no longer recognized. The ultimate investigation of the cause of disease, and the remedial measures suited to it, seem the absorbing object. While our present scientific system of medicine has many followers among the sectarians, sprung from its maternal lap, it still stands proudly alone, brighter and fairer in its record than ever before. The scepticism which has arisen from heresy has had a most salutary and purifying influence on it, and has led us, again and again, to review the course we are pursuing, in order to be assured that there is no deviation from the right direction.

Sceptics hold that with all our efforts, no advance has been made upon the inroads of disease, and that mankind is as much subject to its influence as when medicine blindly groped its way. This allegation I most certainly deny. No longer are whole continents devastated by disease; no longer are epidemics the terror of nations, nor countries made uninhabitable to the human race; for with an intimate knowledge of disease and its origin, scientific medicine has adapted measures to its stay, its relief, and its extermination. And all this has been done notwithstanding population is steadily increasing, and with it, also, the danger of contamination from disease-breeding germs, multiplying at an unduly increasing ratio; that the desire for social intercourse makes itself manifest by closer congregation in localities illy suited for hygienic protection; and with it the stationary, if not reduced rate of certain classes of complaints, must certainly be regarded as a veritable triumph for medicine, and the necessity for continual effort for its advancement.

The means for making medicine more thoroughly understood and serviceable are, without doubt, the general distribution of its principles and conditions by the wide development of medical literature. A great source of satisfaction is the high standard which it has attained with its wide diffusion, thus enabling the physician everywhere to be in close intellectual communion with his fellow-workers. The time when medical knowledge was kept a family or a trade secret, was less productive of true medical advance than any other period of man's existence. With the universal spread of knowledge alone has medicine risen from empiricism, until to-day it may be called a scientific system indeed. It is a matter of congratulation that this great, and the most prominent,

association of practitioners of medicine of our country has launched a journal, which has taken the place of the time-worn Transactions, in which the valuable investigations of the members of our Association were quietly buried. Not alone has our science been advanced by the improved and increased periodical medical literature, but numerous publications on special subjects and branches have appeared during the past year, which have been largely instrumental in promulgating and advancing new theories.

It is the studious investigator, however, who, with untiring zeal and devotion, has disinterestedly employed his time in the study of health, disease, and its curative measures, that medicine has to thank for its principal advancement during the past year. The student in the laboratory, at the microscope, as well as in the actual field of devastating epidemics, is the benefactor of whom too much cannot be said in praise. While it is not our province to enumerate or name them here, it becomes certainly our duty to mention that noble hero. Dr. Thullier, of Paris, who, with the French Cholera Commission, penetrated into the very pest-houses of Egypt to serve the cause of medicine, and gave up his life there, a victim for our enlightenment. His memory should be a lasting one with physicians all over the world as a substantial monument in connection with many other great heroes in our ranks.

PHYSIOLOGY AND PATHOLOGY.

I can say but little of the progress of physiology during the past year. The field is one of vast expanse, and the observations that have been recently put forth have not, as yet, stood the test of time, so necessary in this branch of our science.

In the field of pathology and pathological research the study of the infinitesimal has attracted great attention. Humeral pathology of old has had its day. Anatomico-pathology now seems fast to lose its hold upon our workers, in view of the discovery of the constant appearance of micro-organisms as concomitants of special types of disease. Grosser lesions appear to have lost their interest and importance in comparison with the invading hosts of parasitic enemies to the organic structures. Though their presence was known for years, as has been demonstrated by older observers, we are riding now on the very crest of the billow of excitement that they are creating in medicine. *Tempora mutantur!* Will it be rash to predict a downfall of the omnipotent rule of these minute Vandals who overawe us with their menaces? That they exist there is no longer any reasonable doubt. They have been demonstrated, classified, propagated, and shown to be constant with certain features of tissue changes. Their causative influence is as yet a matter of grave doubt, and one that in accordance with close observation will probably not be soon cleared up. If all that their enthusiastic discoverers and experimenters claim proves true, medicine will resolve itself into a system of micro-botany, leading to the study of the character and habits of its subjects, and the antagonistic elements to their existence.

Of the subjects prominently brought to the attention of the profession and exciting universal interest, more than any other is that of the bacillus theory of tuberculosis and its contagious character. While the presence of micro-organisms in other diseases is being investigated and studied extensively, there is none which has as great a bearing and caused so much comment as this one. Only a few years ago Koch stood almost alone in its advocacy. Now there are numbers of unbiased observers who confirm his famous discovery. Foremost among these is Watson Cheyne, who visited Koch's laboratory for the express purpose of investigating the subject. His report fully confirms the facts set forth by the great investigator, besides demonstrating the constancy of the occurrence of bacillus in all tubercular structures, as well as the relative position of the parasitic organism to cell-structure. Similar confirmatory evidence has been produced by Pruden, Dreschfeld, West, Gibbs, Heron, Wipham, Meissen, and others, from a clinical view of the constant presence of the bacillus in the sputa of phthisis; while Charnley Smith has even ingeniously demonstrated its presence in the expiratory air of consumptives by filtering it through gun-cotton, dissolving it in ether, and then fixing it on microscopical slides for inspection.

Dr. Austin Flint, Sr., accepts the new theory as well as the ætiological character of this micro-organism when added to predisposition, leaving the subject of contagion dependent upon the causative element combined with the favorable soil for its propagation, ascribing the usual absence of contagion to a lack of predisposition, and considers the presence of the bacillus as one of the most essential elements for the diagnosis of phthisis. Drs. Janeway, Welch, and Peabody, well-known authorities on this subject, concur with Dr. Flint in his views; likewise Dr. H. C. Ernst in his contribution presented to the Massachusetts Medical Society, besides numerous other investigators, both here and abroad.

The presence of the bacillus has been observed in other tubercular lesions than the lungs: as in the mouth and soft palate, by Guttmann and Finger; in the skin by Cornil; in lupus by Demme; in the uterus by Lindsey Stephens; in the urinary tract by Rosenstein, Babés, and Cornil, as well as in rectal abscesses by Smith. Dr. Wilson Fox admits the fallacy of his former experiments, and accepts the theory of the contagious character and inoculability of the virus, and that injury to the rodents is not followed by tuberculosis, as previously expressed by him.

Now, while the adherents to Koch's theory have increased wonderfully, there are those not wanting who are open in their criticism, and opposed to the acceptance of anything like a bacterian origin of tuberculosis or other diseases. Their opposition is not based merely upon assertions or clinical evidence, but the result of years of observation and experiments conducted here, as well as at the very birthplace of the bacillus theory. Amongst those most prominently arrayed against it are Spina, of Vienna, Finkler, and Eichler, who pronounce the staining methods of Koch as fallacious and misleading, while Feltz admits his failure with cultivation by following Koch's method.

Formad, in this country, has made a most vigorous

attack upon it, and has referred the ætiology of tuberculosis to histological changes rather than to parasitic invasion, in which deduction he is supported by many eminent pathologists, such as Longstreth and others. In his denial of the contagiousness of tuberculosis he is in accord with the opinions of Virchow, Recklinghausen, Stricker, Gull, Williams, Watson, Paget, Humphrey, Richardson, Bennet, Hiram, Corson, Trail Green, N. S. Davis, H. F. Campbell, and others. Thus, it will be seen that this subject is by no means disposed of yet; and it will undoubtedly form one of the main and interesting points of our discussions at this meeting, in which some of our most prominent pathologists, practitioners and teachers have promised to take part.

The bacillus tuberculosis theory, however, is not the only one that has excited attention. The bacterial origin of other diseases has been earnestly advocated as well. Thus, a micro-organism has been found and studied by Friedländer as a micrococcus of pneumonia, possessing distinct capsules under certain conditions and at certain stages, which he verified by cultivating processes and inhalation of impregnated air, and was enabled in that way, in certain animals, to produce red infiltration of the lungs, and evolved reddish infiltration of the pleura. The capsule was easily seen by means of staining fluids, but does not exist in the cultivated micrococcus, but seems to be reproduced in the experiments upon animals, and appears to be mucin. Though reported before by Giles in the blood of pneumonic patients, where Friedländer failed to see them, they were conclusively demonstrated by cultivation and inoculation to exist. This may serve to explain the occasional epidemic form of pneumonia in certain localities. Buchanan and Russell have described cases of infective pleurisy in which micro-organisms appeared in the effusion. A bacillus of syphilis has been described by Morison, of Baltimore, as occurring in chancres, condylomata, etc., but apparently different from that described by Birch-Hirschfeld; while the micrococcus of gonorrhœa has been cultivated by Burckhart, as well as Sternberg, and successfully inoculated. Again, micro-organisms have been found and claimed as the cause of pertussis, while cases of nephritis and purpura have been attributed to the same cause, and even the vesicles of impetigo contagiosa and herpes labialis, it is asserted, contain them. A micro-organism is said to have been detected in the blood of patients ill with typhus; and Marigliano appears to confirm Klebs and Eberth as to their presence in the blood of the spleen of typhoid-fever patients. The bacillus of leprosy has again been reported by Hausen and Thin, as well as that of scarlet fever by Crooke. The discovery of the bacillus of glanders by Bonchance, Schutz, and Lœffler has been confirmed by successful inoculation. Erysipelas has been demonstrated by Fehleisen to be due to the growth of micrococci in the lymphatics of the skin, and by inoculation and cultivation he successfully introduced that affection both in animals and man. The work of Pasteur and Koch has been directed with success toward the study of the attenuation of virus; and the latter's labors, as head of the German Cholera Commission sent to Egypt and India, have been crowned by the discovery of the specific micro-organism of cholera. The constant presence of the cholera bacillus in the intestines and ejecta, seems to leave no doubt as to the important part they take in that scourge. While Prior has found a micrococcus in the coats of the intestines and stools of dysentery, and numerous organisms have been for years declared to be the cause of cholera, it is due to Koch, for his special skill in this field of research, to accord him the honor of the detection of the special micro-organism, to which may be fairly attributed the pathological changes in these structures.

That the origin of yellow fever should arise from this same cause is readily obvious, when we consider its infectious nature. Though this has been claimed to be the case by Carmona del Valle, and called by him "peronosperma lutea," there seems to be little tangible evidence for it aside from the experiments of Domingos Freire, of Rio de Janeiro, who showed, experimentally, that blood of dead yellow fever patients, inoculated into animals, caused rapid death; and that their blood had, in turn, similar effects. He attributes this to the presence of a cryptococcus, for which he proposes the name of cryptococcus xanthogenicus; and which he also claimed to have found in the earth of infected districts. While these demonstrations prove scarcely anything without proper cultivation and successful inoculation, they point, nevertheless, to a fruitful field for research.

MEDICINE.

Medicine, in a word, comprises everything relating to the healing art; necessarily we will have to give it here a closer meaning in its relation to clinical observation only. The pathological conditions, so nearly allied to it, we have treated of before. The treatment of disease we shall speak of hereafter. Hence, it remains but to call your attention to new phases of disease, of their diagnostic characteristics, and their prognostic chances.

The knowledge of nervous affections, though it has not progressed with the giant strides of other branches of disease, is steadily advancing and emerging from its mysterious enfoldings. The localization of cerebral functions, though now generally accepted, has advanced us practically but little, though the trephine has daringly opened to the neurologist the hidden regions of dura mater and gray matter. Locomotor ataxy has presented in its chronic state three diagnostic points for distinction: that of Duchenne, with the characteristic symptoms depending on the lesions of the columns of Burdach; another depending on diffuse sclerosis of the chord and medulla oblongata, although principally limited to the posterior columns of the former, differing from it by its first occurrence during puberty—sensibility not being affected until late in the disease—and that the uncertain gait and step is not increased by shutting the eyes. A third subdivision is made of the ataxy of the periphery, described by Dejerine as an atrophy of the peripheral sensory nerves.

While the treatment of the insane has so vastly improved, it is to be regretted that our knowledge of

the ætiological factors of psychical disease does not keep pace with it, and from this cause, no doubt, arises the difficulty experienced in the diagnosis of such cases, which give rise now and then to conflicting opinions in law courts, and which are interpreted to the great disadvantage of medical science. The interesting experiments of Brown-Sequard on reflex irritation, and the production by it of profound anæsthesia, bordering on catalepsy, should throw some light on the unravelled secret of hysteria and its allied affections.

The investigations and researches in the bacterial origin of phthisis would of necessity call for a reorganization of its clinical aspects. It has attracted the attention of eminent scientists, both pro and con. The bacterial development from extraneous sources would constitute it as contagious *per se*, and be in accord with the theories of its advocates; while those opposed to it have most ingeniously brought forward arguments, which, if substantiated, would upset our principles of organic law. The origination *de novo* of the bacillus, as claimed by Bouchardt, would depend on metamorphoses, no longer admitted, and certainly not understood nor explained. Guerin, in supporting his doctrine, admits its transmissibility by classifying the tubercular structures as one non-transmissible and another transmissible; although the latter he holds communicable only through putrid infection. After all, these arguments fail to meet the issue, which, in view of the wide spread of this disease, is of paramount importance, in so far as it forms not alone the indication for antiseptic treatment, but the development and propagation of the disease itself.

Typhoid fever has arrested the attention of the profession to some extent, with a view of learning the real danger hidden in it, which is now almost universally conceded to be the accompanying hyperpyrexia, giving rise to the tissue changes. Excretion of nitrogenized material, and non-assimilation of the modification of these under the antipyretic treatment can be accepted as a guide to this conclusion. The treatment by cold baths, of all antipyretics, is now thought to be the most serviceable, if we can trust to the statistics of recent investigators, as well as the thorough researches of Sassetzky in the analyses of the excreta. If, as is stated, the mortality caused by enteric fever in London was ordinarily from 15 to 18 per cent. of the population, and that it has now been reduced by means of the cold water treatment to about 10 per cent., it must certainly be regarded as a great improvement.

Of renal diseases, albuminuria has long been the subject of scientific inquiry, being considered more and more of nerve origin. Its close relation to diabetes, with mutual interchange in certain affections, has brought forward the proposition that both albuminuria and glycosuria may be produced by irritation of certain parts of the floor of the fourth ventricle. And the proposition is well established.

The hypertrophy of the muscular coat of the arterioles, and the increased tension of the vascular system, are also claimed to be due to irritation of the vaso-motor centers of the medulla. The latter especially has proved valuable in modifying the treatment of albuminuria. The neural influences seem primarily, and the renal disorganization from distension of the glomerular vessels progressive steps therefrom. That the toxic influence of certain substances, as well as severe febrile affections, is productive of albuminuria is well known, and a recent instance has been cited where it occurred after varicella. Peptonuria has been investigated and found to co-exist with suppuration from various causes, or with large exudations. Jaksch claims that it is due to the reabsorption of inflammatory products rather than to any pathological condition of the kidneys. The examination of urine for the purpose of detecting pathological products has probably further advanced during the past year than ever before. The old and common tests by nitric acid and heat are said to lack delicacy, and do not indicate albumen unless present in large quantities. The acidulated brine test, the tests with picric acid, Tanret's or potassio-mercuric, the sodium tungstate, the potassium ferrocyanide tests, in their solid or liquid form, or spread on paper for convenience sake, have no doubt their advantages, especially in point of delicacy, so that they seem an improvement on the older methods; but this very delicacy will, at times, mislead the practitioner, who, by the presence of peptones, mucin, urates, and medicinal bodies may form a hasty and erroneous diagnosis; besides, albumen might be detected as a normal constituent of the urine, when the older methods properly applied would serve as an indication of pathological change only. A question of greater importance for the medical chemist to solve is rather as to the quantity of albumen present, than to discover its probable incidental existence. The same may well be said of the new tests for sugar, such as diazobenzol-sulphuric acid, citric acid and indigo, only that they do not mislead, but serve well for qualitative tests at the bedside. For quantitative tests there will probably few outrival the older methods, or the easily applied and accurate polariscope.

The subject of myxœdema has received new impetus with our confréres abroad, both through the pathological researches of Henrot and of Kocher, in connection with the extirpation of the thyroid gland in a number of patients who subsequently showed a cretinoid condition, and the confirmation of an atrophied state of this gland in subjects of this disease. If the committee of the London Clinical Society, having this matter in charge, will solve some of the points concerned, it will shed much interesting light on its functions.

The disease known as actinomycosis, and described by Ponfick as peculiar to horses and cattle, has been exhibited by Treves in a man, whom he brought before the London Pathological Society. All stages of the disease, from minute solid growths to large suppurating and sloughing masses, were present.

The grave accusation cast against American pork by some of the European authorities makes it necessary that I should say a few words here upon the subject. Trichinosis is with us a very rare disease indeed, in comparison to its frequent occurrence in

Continental Europe. In spite of the prohibitive edict against our pork in Germany, quite an endemic of trichinosis has prevailed there of late. As there have been isolated cases reported with us, I will therefore refrain from any attempt at defence, but simply remark that the mortality from trichinosis in this country, in comparison with Germany, would lead us most certainly to discriminate in favor of our product to that of the foreign—even if we do not attribute our comparative immunity to the more civilized manner in which we partake of it than the semi-barbarous fashion of eating it uncooked. French physicians, in the Academy of Medicine, of Paris, have already given their opinion that American pork is not as dangerous as the trichiniphobist would have us believe, and recommend that the prohibition to its importation be removed.

The epidemics of small-pox, which for some years have swept over this country, and have visited almost every town and hamlet, have considerably abated, but few cases, comparatively, being reported now. The questions, if the disease has exhausted the material for its propagation, or if the vigorous vaccination insisted upon by the medical profession, has successfully stayed its ravages, are points which are not yet settled. Again the subject of a common origin of vaccinia and variola has been brought forward, and Voigt states that variola is inoculable into cows, and if used for protective inoculation with man it is equivalent, and even preferable, to vaccine, provided that the virus be far enough remote from its first source, else variola, with all its characteristics, may be developed.

In regard to scarlatina much interest has been attached to its prevalence among animals—as the horse, cat and dog. It has been claimed that contagion was carried both from them to man, and *vice versa*. The pinkeye of horses has been stated to be in many cases nothing else than equine scarlatina, readily contagious, while cases are cited every now and then where the source of the disease unmistakably pointed to the domestic feline or canine pet. Of the greatest interest herewith are the experiments of Stickler with the inoculation of the nasal mucus of horses, suffering from scarlatina, into rabbits and dogs, which produced a modified scarlatiniform exanthem, accompanied by fever and some enlargement of the glands. Blood, from a case of confluent scarlatina, afterwards inoculated in those animals, failed to bring any results. Stickler repeated the same experiments on twelve children, but failed to produce scarlatina in any of them by inoculation with scarlatinal blood, and arrived at the conclusion that the subcutaneous injection of scarlatina virus from the horse is not followed by harmful results, but that it produces a circumscribed eruption like mild scarlet fever, and that such inoculation confers an immunity from scarlatina.

The epidemic which excited the most alarm in its disastrous results, and caused the greatest anxiety as to its spread, was the late outbreak of cholera in Egypt. That country is proverbial for its filth, and, as a consequence, its prolific breeding of epidemic diseases. Although cholera has periodically visited both this country and Europe, its terrible fatality has never been felt so severely as in Egypt, which has suffered from its late outbreak there. The lack of proper drainage, and the use of water contaminated with offal and excrementitious material, are well calculated to give impetus to this disease. From the reports of Sir William Hunter and other gentlemen of the European Sanitary Commissions, we learn of the most loose and incomplete hospital arrangements, while the harshness of its quarantine enforcements arises more from individual egotism and fear than the desire to stamp out the germs of the disease, which are hatched by the stifling heat, from the filth and offal exposed everywhere to view, and offending the nostrils at every step.

Yellow fever, as usual, made its appearance in some of the Southern ports, and while it showed a tendency to a malignant character, and indeed produced great ravages in the Pensacola Navy Yard, it is due to wise quarantine laws, and to the unflinching energy of the surgeons in charge of our naval and marine hospitals, that the disease was not represented in a palliative light, and thus allowed to spread beyond its original cordon. Much praise is due to Dr. Guiteras, of the Navy, for his moral courage in facing the issue in its true light, and thus sparing the South the disastrous experiences of former years. The attempts to fight yellow fever by calling it by another name are fraught with disastrous consequences, and should under no consideration be countenanced. That it is both infectious and contagious can no longer be denied, and, if not accompanied by urinary suppression, it is a disease which otherwise shows a fair percentage of recoveries under proper treatment.

THERAPEUTICS.

It may be said of therapeutics, that while in past years they were ignored to a great extent by many physicians and scientists, they have undoubtedly now assumed new features entitling them to a prominent position. Promiscuous dosing and empirical drugging are no longer recognized, but the application of the physiological action of remedial substances to a pathological condition are the therapeutics of the present and the future.

Among the permanent remedies which have found approval during the past year, there is probably none of greater interest than what promises to be one of the most powerful and reliable antipyretics, a rival to, and perhaps surpassing in its effects as a febrifuge, quinine. It is called kairin. Although it has as yet found but little practical application in our own country, the reports concerning it from abroad are such as would make it desirable for us to give it a thorough, practical test. It may not be all its admirers claim for it, but enough has been learned to place it prominently in the class of antipyretics. It was discovered by Dr. O. Fischer, and described chemically as an oxethylquinoline hydrid hydrochloride, a coal-tar derivative. It was investigated by Filhane, Sassetzki, Knipping, Girat and Guttman, with satisfactory results, while Reigel reports adversely as to his success. Notwithstanding the favorable properties it undoubtedly possesses to reduce fever temperature, it should

be exhibited with caution, on account of its cardiac depressant action. Although it promises a remedy of the greatest value, sufficient investigation as to its physiological effect seems to be still wanting.

Another very interesting remedial substance which has been presented to the medical profession as experimented with, is the paraldehyde, a substance isomeric with aldehyde. It is asserted by Dr. Langreuter that it possesses powerful hypnotic properties, with no abnormal phenomena excepting a slight and irregular pulse. The sleep produced by it is readily induced by doses of about six grams (1½ drachms), generally giving a full night's rest, and when sleep is not produced, still a quieting influence is exercised. It is claimed for it, that it produces no cardiac depressant effect, but from its chemical source this seems doubtful. Dr. J. C. Wilson's experiments in this respect corroborate the above views. It is also claimed for it that a lethal dose suspends the functions of the medulla, and the action of the heart ceases after respiration; likewise that it acts upon the cerebral hemispheres, inducing sleepy drowsiness without preliminary excitement. While cardiac depression from it has been observed, it is said that neither nausea, depression, headache, constipation, nor other unpleasant after effects are produced by its use. It has a controlling action over some branches of the fifth pair of nerves, and seems to correspond in this effect to one of its derivatives—butychloralhydrate, or the so-called croton-chloralhydrate. While no doubt a useful hypnotic, it seems scarcely destined to supplant chloral for that purpose. Its close identity with the latter, however, therapeutically, is its antagonism to strychnine, and *vice versa*, for which property it has been studied and observed by Professor Cervella, who demonstrated that the seat of the opposing action is the spinal cord, the reflex irritability of the medulla oblongata being increased by strychnine and decreased by paraldehyde.

By far the most useful, as well as the most interesting effect produced by any new therapeutic agent given to us during the past year, is the *Abrus precatorius*, the jequirity bean of Brazil. The remarkable virtues of this drug have not alone been due to the curative effect it has exerted when applied as a remedy for pannus and other eye affections, and for which it has been reported as being a most extraordinary curative agent, but principally to the fact that in it we have pressed into our service the ubiquitous microbe, which is receiving at the present time so much attention. Sattler has proved beyond a doubt, that the watery infusion of the substance is a culture fluid, a nutrient field for certain atmospheric germs, which derive therefrom their pullulation, confirming the theory of Pasteur of the agency of aerial microorganisms in bringing about fermentation and morbid changes. That this is not mere speculation was again confirmed by the experiments of Cornil and Berlioz, who produced, by hypodermic injections of the infusion of jequirity, inflammation with suppuration and gangrene of the skin in rabbits, frogs, etc. Those animals which survived were not affected by a second operation, which has led some to the conclusion that the first had acted similar to a vaccination. In animals to which the infusion was given in only a fourth of a drop, injected into the pleural or peritoneal cavity, it caused inflammations, and the microbes were found throughout their circulation in immense quantities. A drop of their blood injected in turn in a frog set up septic infection, and caused the presence of numerous microbes, but if the bean were given as food no infection occurred.

A matter of interest in therapeutics of the past year was the investigations of DaCosta in regard to the salts of nickel, and especially its bromide. While the other salts proved of little, if any value, this bromide was found to possess the properties of the bromides generally, but in much smaller doses. It is claimed that it lowers the temperature, does not influence the pulse, nor affect the excretions; that it is a nerve sedative, without exercising a weakening or depressing influence, and of especial value in epilepsy.

The bismuth salicylate is also a new arrival among us, which has been used in the treatment of various forms of diarrhœa and typhoid fever; the latter disease, it is asserted, it will abort under favorable circumstances, but this claim needs further confirmation.

Nitroglycerine has again come to the surface, and new and striking results, as well as a larger sphere for its action has been developed, along with the closer study of its physiological action. The opinion of Robson in regard to its value in acute and chronic Bright's Disease has been confirmed by its action on the vascular apparatus. Its effect in albuminuria has been recently investigated by Bartholow, who states that it reduces the vascular tension more than any other remedy; lessens the work of the heart by removing the inhibition exercised by the pneumogastric nerve; and that by its action he has not alone seen remarkable instances of relief, but even permanent cures. In angina pectoris it seems second only to amyl nitrite; and while it does not arrest the paroxysm as promptly as the former, it possesses a curative action, and can be used to prevent future atacks. For that purpose it is given daily to restore the diminished vascular pressure. The results attained with this agent, and the study of it along with the nitrites as a class, and their effect upon vascular tension, has recently developed remarkable and interesting facts in regard to one of this class, the sodium nitrite. The dose of it had been stated as about twenty grains, given for a long period with impunity. It appears that this applied to an impure article; that the pure sodium nitrite is possessed of powerful and even toxic action, as reported by Ringer and Murrell, and the commencing dose should not exceed two grains. In connection with this subject it is proper to allude to the controversy arising from the publication of the experiments of the gentleman last named.

Dr. Murrell was severely attacked for his wanton experimentation, as it was termed, on hospital and charity patients, not alone by laymen, but also by members of his own profession. Just how these gentlemen expect to derive knowledge without "experimentation," is not obvious. Perhaps they would have preferred to have been the victims of an erro-

neously stated dose than to have the truth developed by scientific research. Dr. Murrell is entitled to the thanks of the profession for his demonstrations and important deductions, rather than virulent abuse; for with a cessation of "experimentation" the progress of medicine must also cease.

Recent investigations in the treatment of albuminuria, by Bartholow, also show the great utility of the chloride of gold and sodium in this disease, both in the subacute and chronic form. He states that "the earlier it is given the better, if structural changes are to be prevented or arrested, and its curative action will necessarily depend on the extent of the damage already inflicted on the kidneys."

It is well to mention, also, that among others, attention has been directed to the following remedies: Hyperosmic acid seems to have attracted notice, both for parenchymatous injections in tumors as well as for obstinate neuralgia. Convallaria majalis and its active principle, convallamarin, after a thorough test is, according to Robson, inferior to digitalis in its action. The digitalis group, though not definitely limited, seems to have been positively defined as contracting the blood-vessels by their effect on the involuntary muscular tissue of these organs. Hypodermic injections of pilocarpine in myxœdema are reported as being very useful. Barium chloride has been studied physiologically, and while its therapeutic value is undetermined, it is proved to possess a powerful action quite different from the calcium chloride, with which it has been classed, and its resemblance in its action to digitalis is confirmed. Croton oil has been found to consist of two therapeutically different principles, one of which represents a safe and useful laxative, while the other is stated to be a vesicant and intestinal irritant. The use of potassium permanganate, hypodermically injected as an antidote for the bite of the cobra and other venomous snakes, has again been brought forward, and though its efficacy has been doubted by some, by others it is asserted that if immediately or shortly after being bitten it is injected into the area of the wound, it will neutralize the poison, while it will not counteract it when reabsorbed and constitutional symptoms have set in. In connection herewith, Sir Joseph Frayer, who has made an extensive research into the nature of snake poison, states in a recent communication before the Medical Society of London: "The result of my experience is that, so far, no physiological antidote to snake virus is known, and that when the full effect on the respiratory center is produced, remedies are of little, if any avail; albeit, when the poison has entered in small quantities, treatment may be of service on general principles."

The vast research in the field for micro-organisms as causative elements of disease and the discoveries made therein, have given a new impetus to antiseptic treatment in every branch and affection. Antiseptic inhalations for pulmonary disease have proved of value, whether the germ theory be sustained or not. Carbolic acid and creosote are serviceable in typhoid fever, and other antiseptic agents are daily employed with equally good success. If their favorable action prove antiparasitic or otherwise, cannot at this time be ascertained, but in view of the results further investigations are indicated. Amongst the new antiseptics, naphthaline and naphthol have been mentioned as of great service; in regard to the latter, I have ascertained that if pure and properly prepared, it seems devoid of the toxic effects claimed for it.

A new feature of the greatest importance, which was first agitated by the British Medical Association, and brought before us at our last meeting, is that of collective investigation of disease. There is no denying the fact, that not alone have our statistics of disease, its ætiology, course, and termination, been very loosely collated and obtained from sources which altogether inadequately represent the condition of our country, as well as the domicils of the majority of its inhabitants, but that we have, as a consequence, no general idea as to the amount, the severity, and issue of disease, even if we take for granted that the reports of the various health officers are tolerably correct in regard to fatal results. The reports already received from our English brethren have demonstrated their value, and prompt us to a similar mode of investigation.

This system of collective investigation is also pursued in Germany, and it will, no doubt, ere long comprise all the countries which have an organized medical profession. The systematic collection of therapeutic results will alone be invaluable by showing statistically the worth of certain medicinal measures and their comparison in effects with others.

And now, in closing, I would remark that I have no new plans or propositions to offer for your consideration. The Section of Medicine continues to grow and attract more attention with each succeeding year. It is necessary for you, however, with this growth and development, to direct the attention of those entering the profession to the necessity of thoroughly mastering the details of all its different branches; above all that of general medicine, before entering into any specialty. There appears, just at this time, and it is for this reason that I refer to the subject, a desire on the part of a few physicians to gather in cliques, and, with shut doors against their fellow-practitioners, settle to their own satisfaction momentous questions in this or that special department which they affect. Such organizations are generally composed of a few medical authors and teachers and some of their friends, who think themselves immeasurably superior to the profession at large, and would create an aristocracy, as it were, in one of the most democratic of sciences and professions. Here lurks the danger to medicine as a science. When in centuries back the knowledge of special branches of medicine was kept a close secret, and transmitted as an heirloom in certain families, or hidden in the parchments of monastic libraries, the general practitioner was excluded from obtaining knowledge from these sources, and thus benefiting mankind generally, but was compelled to grope his way in darkness and trust to his own intellectual force. At that time it was thought impossible for the ordinary physician to handle the obstetrical forceps or cure favus—yet to-day both are a common practice. To that undesirable point shall we drift again if we will admit of this exclusiveness. The ten-

dency of these cliques is to keep intact their sacred circle for the use of themselves and their friends, not to study and teach by their assemblies, but to force the general practitioner to call to his aid these special oracles in every possible case.

Medicine, to be beneficial to humanity, must be open to one and all, and if its practitioners are to be excluded from medical societies and their meetings—not from a lack of knowledge and good standing—such societies have outlived their usefulness. Special studies may be made by physicians in certain directions, but the advantages of their research and study must be verified by their practical demonstration through the general practitioner. Without a thorough knowledge specialism avails little. This powerful organization should represent every branch and speciality of medicine, and its knowledge should be open to all its members. We are all entitled to the benefits derived from associated investigations. Outside organizations on special subjects will detract from the interest and advantages of our meetings, and the younger members, neglecting the general subject of medicine, dazzled by the apparent brilliancy of a select few, will wander forth to ultimately destroy their own usefulness. The American Medical Association is the representative body of the medical profession of this country, and has been organized and conducted by gentlemen who have grown gray in its service, and whose brows are adorned with chaplets most worthily won, not only at home but abroad. It is for them, and for you, my fellow-members, to control the means of disseminating our science, and not for a few, who, at best, only form but a spoke in the wheel of the triumphant chariot of our science. Our young men should learn from you that knowledge must come to them by the coöperation of their professional brethren from all parts of our country rather than from a few, who, in their exclusiveness, set themselves above the active members of the greatest and most humanitarian of all professions.

MEDICAL PROGRESS.

ANATOMY AND PHYSIOLOGY.

ANATOMICAL INJECTION OF THE BLOOD-VESSELS THROUGH THE CEREBRO-SPINAL CAVITY.—Dr. B. W. Richardson, in his *Asclepiad*, gives the curious results of some experiments made by him several years ago. He was trying to stimulate the brain directly with oxygen gas, and used for the purpose a long subcutaneous injection needle introduced into the cavity of the cranium from behind the eye ball, through the optic foramen. In his operations on animals, on opening the abdomen to expose the iliac veins and inferior cava, they were found to be filled with dark blood, then, on using his injection, almost instantly the blood in the vena cava inferior became of bright red arterial color, the color gradually extending along the vessel, until, in time, it reached the right side of the heart. This effect was produced by the use of oxygen, of common air, and of carbonic oxyde. The venous blood in the senuses of the brain and in the vena cava superior was not changed in color by the injection. Next, after dividing the vena cava and inserting a tube, coal-gas was injected in the same way, and escaped so freely from the vena cava jet that it could be lighted immediately. A drachm of mercury was made to pass in the same way into the iliac veins and lower part of the vena cava, this was repeated until the mercury reached the heart, traversed the lungs through the pulmonary circuit, reached the left side of the heart and extended into the arteries. In the process of embalming, four pints of the preserving fluid can be injected over the body through the subcutaneous injecting needle, by the cerebro-spinal cavity.

Dr. Richardson has been unable to discover, up to this time, how, from the cerebro-spinal cavity, the injected matter enter the veins so easily. It charges the plexuses of the medulli-spinal veins which lie between the pia mater and the arachnoid, but the entrance of it is obscure. No injury is traceable in the brain substance after the injection, unless undue force is used, but it is obvious that the lateral ventricles are first charged with the injection.

This leads to the almost certain influence that the cerebro-spinal fluid, which is always being secreted, finds its return current into the venous circulation in a similar manner, and that the cord and brain are thus relieved of pressure from it. If that be so, we have a ready and rational explanation of many cerebral and spinal disturbances occurring under retarded current of blood through the vena cava inferior by pressure in the vessel, or by obstruction in it in some part of its course. He gives as a case in point that of a gentleman advanced in life who was laboring under ascites. The abdomen was tense with the fluid, but the urgent and apparently fatal symptoms were cerebral and spinal. The patient was quite unconscious, breathed with deep stertor, and had frequent convulsive starts and tremors. Being in consultation, he suggested that the nervous symptom might be due to obstructed venous circulation and what might be called cerebro-spinal dropsy, and advised tapping, which was done with the result of drawing off eight pints of fluid, and restoring the patient to consciousness. He lived for nearly two years afterwards in comparative comfort, undergoing the operation of tapping several times, and sinking at last from gradual exhaustion increased by senile degeneration. Dr. Richardson thinks it probable that the vertigo which is met with in temporary hepatic obstruction, is often due to retardation of the return ascending venous current, and suppression of the cerebro-spinal secretion; as also hysterical convulsion, preceded by great distension of the abdomen from flatus, and that puerperal convulsion may be mechanically induced in the same manner, as the discharge of the cerebro-spinal fluid into the general circulation is seen to be, chiefly, at a part of the venous system where uterine pressure is most likely to prove an impediment to the ascending venous current.

EXPERIMENTS UPON THE RELATIVE RAPIDITY OF THE TRANSMISSION OF VISUAL, AUDITORY, AND TACTILE IMPRESSIONS.—M. A. M. Bloch reports to the *Jour. de l'Anat. et de la Physiol.* a series of interesting experiments upon this subject, which he sums up as follows:

1. The relative rapidity of sensorial transmissions cannot be studied by the method which consists in a voluntary response to an excitation of the senses; as it requires the coöperation of various parts of a physiological cycle, viz.: peripheric modification; nerve transmission; transformation of a sensation into perception; transformation of a perception into volition; motor transmission; muscle inertia; time lost by the instrument.

It establishes results upon an element that is unknown in its duration as well as in its essence; the transformation of a perception into volition; an individual element that is variable and modified by habit, and fundamentally is independent, as in touch, for example, of the duration of tactile transmissions, being in opposition to them.

2. The relative rapidity of transmissions of sight, sound, and touch, may be determined by noting the apparent simultaneousness of these sensations, and in studying the limits within which this simultaneousness manifests itself.

3. The interpretation of time space comprised between these limits depends upon the combined actions of the time of transmission and the duration of the persistence of the sensations.

4. Studying in each particular case the duration of the persistence of the sensations submitted to experiment, one may deduce the fraction of a second which measures the comparison sought for the comparison of sensorial transmissions.

5. Each of his experiments was composed of two parts independent of each other, and the concordance of the two results established a mutual control between these parts.

6. The comparison of vision, audition and touch, two by two, constitutes three distinct experiments; the control of each result is then proved by five other concordant results which are absolutely independent.

7. This quintuple proof of each result is not only a guarantee for the numeric value of each, but also, and particularly, a guarantee for the soundness of the theory which governs the experiments.

8. He proposes to designate under the name of *Limit of Appreciation* the sensorial error which cannot be avoided either in comparing two sensations of the same order, or in comparing two different sensations in connection with the movement of physical excitation.

9. He proposes to reserve the name of *Personal Equation* to the error of appreciation, readily modified, which results from the cycle commencing by an excitation and finishing by a voluntary movement.

10. In his last analysis he reaches the following results: Of the three sensations studied, vision is the most rapid. Then comes audition, the transmission of which is $^1/_{72}$ of a second longer than transmission; and lastly touch of the hand where the transmission continues $^1/_{21}$ of a second longer than visual transmission.

MEDICINE.

MALARIA AND THE EUCALYPTUS IN ITALY.—Consul Welsh, of Florence, reports to our Department of State (United States Consular Reports) a consideration of this subject, accompanied by a map showing the infected districts of Italy, which unfortunately is not published with the report. The map shows that Florence is not considered malarial, but its death-rate is considerable, while the deaths from typhoid fever, which term must be accepted with a very general signification, amount only to 166, the deaths from diseases of the respiratory organs and consumption amount to 1,480, or more than 25 per cent. of the total registered for the year 1882. The changes of temperature in Florence are so sudden and great, and the air so impregnated with the snow, which during the winter lies on the hills surrounding the city, that the effect on the lungs and general health of a constitutionally delicate person is most disastrous.

During the summer the days are hot and glaring, while the nights are very cool, a change of 25° F. not being unusual. During the winter piercing cold winds from the northwest, or warm winds from the south (sirocco), accompanied by rain, prevail. For consumptive patients, he recommends Pozzuoli, near Naples, the sulphuretted air of which is most beneficial, or Amalpi, on the Bay of Salerno. Both are protected from the north winds and enjoy almost uninterrupted sunshine.

Of the sixty-nine provinces into which Italy is divided, only six are considered completely free from malaria; the rest are more or less affected. Of the men composing the army, more than 10 per cent. suffer from fever during the year, and submit the State to an annual expense of about $200,000. The remedy which has been commenced is the planting and nursing of trees. The eucalyptus has been adopted as most effective. At Ventimeglia, which place was impregnated with fever in 1875, there were planted about 800 globulus eucalyptus, and in two years' time malarial fever disappeared. Great success has also attended the planting of the eucalyptus along the lines of railway and at the stations. An important nursery has been established by the Romane Railway Company, at Nola, near Caserta, and there are also many nurseries of the eualyptus due to private enterprise. Government committees having satisfied themselves that by the gradual development of groves of the eucalyptus tree, malarial fever may be, if not exterminated, to a great degree lessened, it is proposed to offer a reward, authorized by a law now before the national Parliament; for the production of the eucalyptus, which reward rates for each plant having a circumference at one meter from the ground of from 80 to 85 centimeters, 1 lire; to from 131 to 135 centimeters, 2 lire. For every centimeter over 1.35 meters, the reward will be 5 centimes.

ON GENITAL DIABETIDES.—The subject of diabetes has been especially engaging the attention of our French brethren for some time past, and their periodical literature contains much that is interesting on the subject. Prof. Fournier (*Jour. de Med. et de Chir.*), in his clinic at the Hopital Saint Louis, discusses the effect produced upon the genitals by what he calls diabetides. Diabetes acts in two ways; by the general alteration of the system, and by a local influence through the direct action of saccharine urine upon the integument. The sugar by its fermentation produces a sharp irritation of the skin, and, moreover, it favors the production of cryptogamic vegetation, which is of much importance. Among diabetics there are to be found at different points on the genital organs fatty crusts containing cryptogamic elements, which, according to Friedreich, give under the microscope the pathognomonic appearance of diabetes, and which resemble somewhat the parasite of muguet.

The various dermatoses of diabetes rarely appear suddenly; they are generally preceded by an intense pruritus, which may be of extraordinary violence, and cause perfect torture. It is particularly in women that this is most severe, being seated on the vulva, perinæum, and anus, causing loss of sleep and of appetite. It is seen from this that these symptons may occur without any cutaneous lesion on the one hand, and without any other of the marked symptoms which accompany diabetes. It should then be an invariable rule, that whenever an intense pruritus of the genitals occurs, without any lesions, the possibility of the existence of diabetes must be taken into consideration.

The first symptom observed in the woman, after pruritus, is vulvar erythema, the characteristics of which are in no way special, but which is only the first stage or the most common form—viz.: eczema. The eczema may be acute or chronic. The acute form is characterized by a marked redness extending over the vulva and perivulvar parts, producing a general turgescence, a serous weeping, local pain, intense itching, with smarting. It resists all treatment, improves a little, but is rarely cured; it has a great tendency to relapses. These variations are frequently due to the variable quantity of sugar in the urine; but after the lapse of a certain time the acute merges into the chronic form.

The chronic eczema does not occupy exactly the same seat with the acute, it generally extends further —to the groins, the abdomen, and the perinæum; its redness is darker, and is not effaced by pressure of the finger. The itching is at its height—repeated scratchings have produced a general hyperplasia of all the tissues, a true pachydermic condition, the labia majora and minora, and the different parts comprising the vulva are hypertrophied, and there is an active inflammation of all the anterior half of the vagina. Also on the mucous portions there are sebaceous crusts containing cryptogamic vegetations. So constituted, this form of chronic eczema is to a certain extent special in its character. It persists indefinitely, and is only modified in its extent. It is always susceptible to treatment, which must be prolonged and general relative to the diabetes itself, as well as local.

In man similar symptoms may result from diabetes, but they are more complex in their character. These diabetides occur on the gland under three principal forms, which have a close connection: erythematous balanitis, herpetiform balanitis, and eczematous balanitis. The first is characterized simply by erythema, with a little swelling of the meatus, limited at first, but soon extending to neighboring parts. In the second form the gland is more or less hyperdæmic, and showing little disseminated epithelial expoliations, round or oval, and resembling herpes closely. In the third form there is a true eczema of the gland, the surface of which has become epidermoid, desquamating, creased, and cracked at certain points, and the seat of a violent pruritus.

The prepuce is very often affected, particularly when it is long. In the diabetic eczematous posthitis, there is to be seen at the inferior ring a series of fissures in the shape of a crown, due to the movements of the prepuce necessary to uncover the gland. The posthitis is generally associated with balanitis, and one may say that this combination with its puffy condition, its cracks and its crown of fissures, is characteristic of diabetes. Eczema so localized is only found in this disease.

This form of balano-posthitis also often tends to the production of phimosis from the thickening and diminution of elasticity of the prepuce, as well as from the progressive narrowing and atresia of its inferior ring. Phimosis may in turn cause balano-posthitis. Then follows difficulty in urination, a more or less abundant and persistent serous discharge which is so irritating as to lead the patient to fear venereal disease, and finally a violent pruritus. In these conditions, phimosis is a marked and distinguishing sign of diabetes, and it has certain characteristics which merit attention: it is a subacute phimosis, very different from blenorrhagia; the prepuce is thick like parchment, non-elastic, immobile, without possible displacement, with sclerous atresia of the orifice, and finally, in its evolution it is chronically progressive, often taking many months or years to establish itself.

This phimosis, moreover, frequently undergoes certain complications. The infiltration may be excessively hard, and of a knotty form, giving rise to fears for a cancerous alteration, and it may produce vegetations remarkable for their rapid increase, repullulation, and the size which they may attain. The local treatment has one special indication, that of keeping the gland free from contact with the urine. When it is found to be incurable by the use of the ordinary treatment for such affections, the question of circumcision arises, but on account of the extreme risk incurred in all surgical operations upon diabetes, this should not be attempted until all traces of sugar have disappeared from the urine. There have, it is true, been successful cases, but the cases in which phymous, erysipelas and gangrenes have supervened are too numerous to warrant its attempt.

The genital organs may also in this disease be the seat of gangrenous lesions, but they are very rare.

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SATURDAY, MAY 10, 1884.

AMERICAN SURGICAL ASSOCIATION.—This Association closed its regular annual meeting in the city of Washington, on Saturday, May 3, 1884. Its meetings, during the four days it was in session, were held in the hall or lecture-room of the National Museum Building of the Smithsonian Institute. About fifty members were present, and took a more or less active part in the proceedings. The number of papers presented was large, and, as usual on all such occasions, some of them possessed a high order of merit, while others were indifferent, or of little real value.

The two leading papers read during the last day of the session were on "Trephining for Epilepsy," by Dr. W. T. Briggs, of Nashville; and on "Extirpation of the Tongue in Cancerous Affections," by Dr. Basil Norris, of Washington. This latter paper represented the number of cases on record of extirpation of the entire tongue as 126, the results of which were given in 124 cases, claiming ninety-five recoveries and twenty-nine deaths. If this proportion of recoveries refers only to the number who recovered from the direct effects of the operation, it is probably correct. But so large a proportion of *permanent* recoveries would show that "cancerous affections" of the tongue are far less liable to reproduction, than the same class of affections in any other part of the body. The following officers were elected for the ensuing year: President—Dr. Wm. T. Briggs, of Nashville, Tenn.; Vice-Presidents—Dr. J. C. Hutchison, of Brooklyn, N. Y., and Dr. E. H. Gregory, of St. Louis, Mo.; Secretary—Dr. J. R. Weist, of Richmond, Ind.; Treasurer—Dr. John H. Brinton, of Philadelphia, Pa.; Recorder—J. Ewing Mears, of Philadelphia, Pa.; Council—Drs. H. F. Campbell, of Augusta, Ga.; Hunter McGuire, of Richmond, Va.; P. S. Connor, of Cincinnati, O.; and J. S. Billings, of Washington, D. C. Washington was selected as the place for the next annual meeting, and Dr. J. S. Billings as chairman of the local Committee of Arrangements. We regret to learn that Dr. S. D. Gross, to whom this Association is largely indebted for its first organization, was too unwell to be present.

During the meetings the Association decided to omit the annual dinner for this year. Nevertheless, some twenty of the members, including the retiring President, Dr. E. M. Moore, of Rochester, N. Y., enjoyed a banquet at Wormsley's Hotel, on Friday evening, under the superintendence of J. Ewing Mears, of Philadelphia, and L. McLane Tiffany, of Baltimore. Besides the eatables, there were the usual number of toasts and speeches, making the occasion altogether a pleasant and enjoyable one.

AMERICAN CLIMATOLOGICAL ASSOCIATION.—The members of this new organization assembled for their first annual meeting in the hall on the northwest corner Sixth and F streets, Washington, on Saturday, May 3, at 10 o'clock A. M. Though not a member of the Association, we went to the hall at the proper time, expecting to hear some good papers and discussions on topics of the highest interest. In this we were disappointed, however, as only fourteen of the forty members enrolled upon the list had made their appearance, and there being no audience but myself and a friend who accompanied me, the members present decided to devote their time to the consideration of the report of a committee on constitution and by-laws, and such matters as related to the completion of their organization, and postponed the reading of the papers until Monday morning, when it was hoped that a larger number would be present. Among those present whom I recognized as personal acquaintances were Dr. Charles Denison, of Denver; Dr. Frank Donaldson, of Baltimore; and Dr. A. Y. P. Garnett, of Washington. The first-named has a long and interesting paper on "Dryness and Elevation the Most Important Elements in the Climatic Treatment of Phthisis."

It is illustrated by maps and charts, and is based largely upon his personal observations during many years of residence and practice in Colorado. The second is to read a paper on "The Climate of Large Cities Dangerous to Consumptives," a subject of

scarcely less importance than the other, and yet one which has received less patient and accurate investigation than it deserves.

The observations made under the direction of the standing committee of the American Medical Association on the meteorological conditions of the atmosphere and their relations to the prevalence of disease, have shown that in the more densely populated parts of our large cities, hardly a trace of ozone or other active oxydizing agent is to be detected at any part of the year, while both free and albuminoid ammonia, resulting from the decomposition of organic matter, are seldom absent in the same localities. How far these conditions may favor the more frequent development and more rapid progress of phthisis in large cities, can be determined only by observations so numerous and protracted, that real causes and effects can be separated from mere coincidences. While looking at the limited number present in the meeting of the Climatological Association, I could not help thinking that all the objects of the organization could be just as well attained, at less expense, and with much better security for an audience, in connection with one of the Sections of the American Medical Association, than in a separate capacity. The special field the members propose to cultivate, namely, the relations between pulmonary diseases and climatic influences, might be prosecuted with perfect propriety in the Section on the Practice of Medicine and Therapeutics, where a good audience is reasonably certain, and from which the papers would speedily pass into the journal of the Association, and be widely distributed to the profession in all parts of the country, instead of being incorporated into a volume of Transactions to be read by very few outside of their own membership.

The same remarks apply to the Surgical Association and the Section on Surgery and Anatomy of the American Medical Association. If there should not be time to receive and consider all the papers in these Sections, it would be much more economical, both in time and money, to permit such Sections as were overcrowded to remain in session one, two, or three days after the time allotted to the general sessions of the Association, than to maintain a separate organization for each special field of professional work.

Just as we go to press the news comes of the death of Dr. D. D. Gross, the eminent surgeon and former president of the Association. His death occurred May 6, 1884.

SOCIETY PROCEEDINGS.

CHICAGO MEDICAL SOCIETY.

At the meeting of the Chicago Medical Society, held April 21, 1884, the following paper "On the Causes of Laceration of the Perinæum during Parturition, and its Prevention," was read by Philip Adolphus, M.D., Chicago:

The perinæum receives perhaps a rent in one labor, by the passage of a large head or ossified fontanelle; or possibly by a child with large shoulders. This is not sutured, and may not heal completely. In a succeeding labor, a face, or an occipito-iliac presentation, or some other unusual position of the head, renews the laceration and leaves a larger outlet.

A very *rapid delivery* through an infiltrated vulva may be *necessitated* by convulsions. Asphyxia in the child—the result of many conditions—*may require* that the shoulders, after the head is born, be *rapidly* removed whilst they are offering their *largest diameter* to the *smallest diameter* of the inferior strait.

Although the more frequent application of the forceps has made physicians expert in their use; yet laceration of the soft parts *do occur*, in the practice of young physicians, when in their *earlier cases* they use the forceps.

In difficult head and face labors also, where the forceps is used by the skillful practitioner, the perinæum may be lacerated.

Now, lacerations of the perinæum rarely heal throughout their whole extent *spontaneously*, although when carefully sutured the integrity of the perinæum is restored. In later births the scar generally stretches and yields as well as the normal tissue.

The *result*, then, of previous labors *is*, that the vast majority of all multiparæ who suffer with chronic pelvic disease, have lost one-third or two-thirds of the thickness of the perinæum, and some have merely a very thin partition between the vagina and rectum. Not a few show cicatrices of far more extensive lacerations, implicating even the anus, which have healed without operation. Very few women come now-a-days under the notice of the gynæcologist with lacerations implicating the rectum, whilst the rarest of all met with are those central lacerations of the perinæum, through which the fœtus has passed; for these lesions above all others, heal easiest.

The *frequency* of lacerations of the perinæum in general, is 15 per cent., of which 35 per cent. occur in primiparæ, and 53 per cent. in primiparæ over 30 years of age.

The *causes* of laceration are due to the *structure* of the pelvis, the *condition* of the soft parts of the mother, to *the fœtus*, or the *character* of the labor.

Primiparæ generally have the fourchette lacerated in the first labor.

Excess of energy in the *contractions* of the uterus, may be developed by a *narrow pelvis;* the head, after a tedious labor, being forced rapidly through the perinæum, by an irritable and violently excited

uterus; the patient thereby being exposed to the dangers of precipitate and tedious labors.

Any deformity of the bony pelvis, as, where the sacrum is too straight, or too near the pubis; where the coccyx is anchylosed, or where the rami of the pubes and ischia approximate too closely, may cause the head to advance too straight, or may force it too far backwards. In all such instances the proper extension of the head cannot occur, and it is pressed too powerfully against the floor of the pelvis, causing laceration.

In some primiparæ, whether thin or plethoric, especially in those who have married early or late in life, we meet a peculiar nervous or vascular excitement which disposes to rigidity of the soft parts during labor.

In these cases of "vital rigidity," and others where the elasticity of the mother's tissues are at fault, the arrest of the fœtal head at the floor of the pelvis causes the uterus to contract violently, inducing great pressure in the perinæum. The soft parts gradually yielding, the child is born; more frequently, if skilled assistance is wanting, the perinæum lacerates more or less extensively.

Now-a-days physicians and midwives are taught to interfere earlier in irritable and rigid conditions of the soft parts, before lacerations are likely to occur. The greater danger of losing the life of the child in first labors, is a sufficient reason for expediting delivery in cases of tedious labor.

The narrowness of the perinæum may not permit the head to turn well forward, and cause it to rupture, *or* firm cicatricial thickening, or syphilitic or malignant deposits may weaken it; *and* deformities of the os vaginæ and vulva from the same cause, or *any other* physical obstruction, may induce laceration.

Swelling of the vulva, from infiltration of serum, in cases of albuminuria and threatened convulsions, may induce laceration and sloughing if small incisions are withheld. These incisions into the skin and mucous membranes drain off the serum, and overcome the obstacle to labor.

Ordinary-sized heads presenting normally in these conditions of the perinæum, may induce lacerations; nay, even small heads may do so, because they pass too rapidly. The narrower the genital fissure, and the larger the head, and the more rapid its passage, the more easily the perinæum ruptures. Large heads—mostly found in boys, who are generally heavier than girls, and who have consequently large and firm skulls—increase the difficulties of any labor, especially in primiparæ, owing to the greater tonicity of the parts. But these are found mostly in multiparæ, for, according to Schrœder, "the bi-parietal diameter of the head increases quite out of proportion to the number of labors, and the age of the mother."

Large women run more danger of laceration of the perinæum, because they are generally delivered of larger children, for the weight of the child increases with the weight and age of the mother. Therefore, a multipara of stout frame and mature age will have the greatest strain on the perinæum; but even here the soft parts will have been dilated by previous labors.

The most favorable presentations for the perinæum are those of the breech. In head presentations the normal is the best. The occipito-iliac and the face presentations are the least favorable. Any other parts of the body presenting with the face increase the danger. The shoulders occasionally are too large. They are then retained at the entrance of the pelvis, and obstruct the passage of the head. The forceps will assist its passage; but the shoulders again hinder the passage of the trunk after they have gotten to the bottom of the pelvic cavity, and then rupture of the perinæum takes place.

The rapidity of the labor is important. In rapid labors, where the uterus and the accessory muscles act too violently, the head may not only tear the perinæum, but also the vagina and cervix. In these cases the shoulders may be pushed simultaneously through the lacerated floor of the pelvis. More frequently the physician causes the laceration when the labor requires a speedy termination in the interest of mother or child, or of both. For instance: after a difficult forceps labor, in cases of convulsions, in prolapse of the cord, or in cases where the cord is around the neck of the child, in tedious labors, or after profound losses of blood. The child, after the head is born, either by the efforts of nature or assisted by the forceps, is often in a state of asphyxia. It does not breathe or cry; its face is congested. Every moment is precious. The physician must deliver the trunk in order to resuscitate it.

The exhausted uterus rests awhile; the equally exhausted woman, although relieved of intense agony, cannot be induced to make bearing-down efforts; or she is still under the influence of an anæsthetic. The head and face are completely disengaged; the soft parts embrace the neck.

The child's head is placed antero-posteriorly. Rotation of the shoulders and the consequent external rotation of the head has not taken place; they are therefore at right angles with the head, in the transverse diameter of the outlet, which is the smallest diameter of the inferior tract.

Anxious to deliver, the physician gropes for the axilla, inserts his finger into it, pulls down one shoulder, then the other, delivers the body of the child, and resuscitates it. By-and-by he finds an extensive laceration of the perinæum, which might have been prevented had he tried to rotate the shoulders from the transverse into an antero-posterior position during extraction.

In his anxiety to save the child, he forgot that the head and neck of the fœtus are at right angles; that when the head disengages from before backwards at the vulva, the shoulders are situated transversely at the inferior strait, which renders it necessary that the head and body should perform necessarily the same mechanical movements of rotation and disengagements. Furthermore, the external rotation of the child, the so-called movement of restitution, is caused solely by the rotation of the shoulders.

What must be done to prevent laceration of the perinæum? Our principal means of prevention is to regulate the rapidity of the passage of the head and body of the child.

During the latter stages of labor we should endeavor to have the patient completely under control, by removing irritability and obtunding sensibility. Even the severest pains should not be agonizing, but rather stimulating. Violent bearing-down pains by stemming the feet against the foot of the bed, or pulling on sheets, should be discouraged.

The pressure of the patient's hands against those of the nurse is sufficient. Whenever the uterus contracts forcibly and the presenting part presses against the perinæum, the patient should be forbidden to bear down and instructed to open her mouth. If the patient cannot forbear doing so, an anæsthetic must be used.

The manual management of the perinæum rests on this principle, namely: to superintend the disengagement and expulsion of the presenting part, with safety to the soft parts of the mother. It is therefore expedient sometimes to assist as well as to retard the advancing part; whether it be of the vertex by extension, or the face by flexion. This principle guides the practice of all physicians, however much the minutiæ might differ. The following method has served me well:

Let the patient lie on her back, when the perinæum is distended by the head. The physician's right hand is applied to the perinæum, with the thumb near the vulva, and the four fingers pointing towards the rectum. Thus the palm of the hand covers the head from the nuchæ to the frontal bones. If the pains are too violent, he presses the occiput of the child in the direction of the coccyx, by introducing his thumb into the vulva, whilst at the same time the palm of the hand lifts the perinæum and head in the same direction.

If it is desirable to assist the extension of the head, he inserts the second and index fingers into the rectum if necessary, and presses the frontal bones towards the symphysis, whilst the palm of the fingers and hand elevate the perinæum in the same direction.

If the pains require neither expediting nor restraining, the physician has his hand in readiness to do whatever is necessary, without the slightest pressure being made on the perinæum.

The introduction of the index and second fingers into the rectum enables us to advance the head materially. By it the relations of the child's head to the perinæum can be well appreciated.

If rupture of the perinæum is imminent, owing to the violence of the pains, authorities advise that the patient be placed on her left side, and lateral incisions be made. I prefer the dorsal position, the administration of ether, and the removal of the head by forceps.

I can conceive that it might become necessary where laceration is inevitable, to make lateral incisions into the perinæum; but the timely application of the forceps will render this procedure useless; for it will save at the same time the soft tissues of the mother and the life of the child.

In applications of the forceps, the *advice* of Elliot should be followed; of introducing two fingers *deep into* the rectum, for this manœuver will impart *exact information* of the *relations* of the head and soft parts, *to the forceps*.

In narrow pelves, either the forceps or turning is indicated, *long before* the uterus would be lashed into such an excess of energy as would force the head through the perinæum.

In fact, in *all cases of first labors*, the forceps is indicated for the safety of the child, *before* the perinæum is threatened.

For the treatment of rigidity, opiates and chloral are *advisable*; they *remove* irritation and *promote* dilatation, and often render the exhibition of anæsthetics *unnecessary*. Morphia by the mouth has been given by me for years, and *by it* a timid woman can be carried through a tedious labor, *without* losing courage or suffering intensely. It obtunds the agony of the *latter stage of labor*, promotes sleep *without* abolishing consciousness, even during the short intervals of the last pains, for the renewed contractions will immediately awaken the patient.

DISCUSSION.

Dr. D. T. Nelson thought dilatation and relaxation of the perinæum usually begins long before the head of the child presses upon it. But if this process is tardy, then it may be necessary to apply emollients or fluids, to facilitate the relaxation, also give chloroform to hasten this and the labor. To expedite a labor, the perinæum should dilate, but if this is soft and succulent, then we do not resort to emollients, or perhaps the perinæum may be aided in dilating, by the accoucheur using the back of the thumb and finger.

Another observation: Corpulent women are more likely to suffer from laceration. Is it because adipose tissue tears more easily? This being true, how can this be prevented in an exceedingly corpulent patient? We should aid nature in trying to make the process of labor as nearly normal in every respect as possible.

Dr. J. H. Etheridge asked incidentally the members of the Society, if they had ever noticed the skin over the perinæum ruptured, where the rupture did not include the body of it? He then recited a case, a primipara, forceps delivery, where the skin only was ruptured nearly the entire length, from the fourchette to the rectum.

Dr. Jaggard thought there was but little more that could be added to that which the writer had stated and explained in his paper. Regarding the technique —" to support the perinæum "—this is a misnomer. Protection covers the ground more fully, and is a better term.

In Australia, some portions of France, and the United Kingdom, a patient is confined on her left side. In Germany the woman is placed on all fours, so to speak, as they reason there the child's head, then, will be in a state of flexion. The perinæum is a distensible body, and admits of the two-fold action, flexion, and substitution of the child's head. No amount of protection will preserve a perinæum from rupturing if there is malformation or infiltration of unhealthy tissue, as serous tissue or quantities of adipose in the perinæum. As one of the speakers alludes

to ephisiotomy (Hecker) says, if performed, *i.e.*, the conjoined method, may preserve it. Under the supervision of Karl Brown, of the Vienna hospital for lying-in women, during the speaker's experience the first two years with his first fifty cases, one-half of them resulted in laceration of the perinæum, but later only two cases ruptured in 100.

Dr. T. P. Seely frequently gives chloroform to quiet the nervous tendency a patient may have, and to ease her pain. This, he believes, will tend to very much lessen the danger of laceration of the perinæum.

In his practice he permits the patient to inhale it from the bottle, and does not sprinkle it on a handkerchief. By his method much less of it is used, and in this manner it can be done with much satisfaction.

Dr. J. S. Knox, not having heard all of the paper read, would only state that, in his practice of late years, to save the perinæum, where the uterine forces are exhausted and the passages dry, he uses small light forceps with a double curve. We should have complete anæsthesia of the patient. We can then extract the head easily, and by these means save the perinaeum.

Dr. C. T. Fenn. Regarding the position of a woman, the dorsal decubitus, it seems to him, is, *par excellence*, superior to all others, and then, to obtain the best results in preserving the perinæum, we should support this body with the left hand, then with the right hand placed over the patient's abdomen, and with moral influence in soothing her, he thought had much to do towards a favorable result; also to calm her by gentle measures, has much to do where there is present rigid muscular action, which is removed, and a state of relaxation will ensue. Fluids do not promote the expansibility of the perinæum, nor do ointments on the integument have much effect in this direction.

Dr. Jaggard stated further, that in Philadelphia, Boston, and New York, the left lateral position is most emphatically employed.

Dr. Adolphus concluded by saying, every physician uses emollients to soften and relax the rigidity that may be present in perinæi. He uses two fingers to keep the parts separated, and we must not permit the parts to become dry. The child, though, is primarily to be saved; the perinæum secondarily. Regarding external ruptures, he thinks they occur, but we may not notice them at the time they happen, but later, if we examine them, as in a few months, we then may notice a cicatrix. He thought Dr. Jaggard was mistaken in his statement that but two lacerations occurred in his last 100 cases that he alluded to, although he knew the doctor made the statement sincerely enough, but had he examined his patients six months after, there doubtless would have been cicatrices noticed.

BOOK REVIEWS.

INSANITY—ITS CLASSIFICATION, DIAGNOSIS AND TREATMENT. A Manual for Students and Practitioners of Medicine. By E. C. SPITZKA, M.D., Professor, etc., etc., etc. New York: Bermingham & Co. 1883.

This work, according to its preface, has been enlarged from an "essay to the dimensions of a general treatise, at the requests and suggestions of pupils and professional friends," in order to "lay special stress upon points which will prove comparatively new to most American readers," and because the author "has felt that there exists a need for a treatise, which, without being so exhaustive as to tire and bewilder the beginner and the general medical reader, shall direct attention to some of the salient points of psychiatry, etc., etc." The work appears, moreover, to be the precurser of a "larger one on insanity which the writer has in preparation, and which will appear in a few years." The work is divided into three parts, of which the first has for its subject "the general characters and the classification of insanity; the second, the special forms of insanity, and the third, insanity in its practical relations.

In the initial chapter the author, following the stereotyped programme, attempts the impossible feat of framing a verbal definition, which shall include all that is, and exclude all that is not, insanity; and with the usual result. He has, however, succeeded in framing a "definition" which, for length, circumlocution, involution and vagueness stands unrivalled. It moreover includes conditions in which every thoughtful man frequently finds himself without a suspicion concerning his sanity. In the second chapter the delusions of the insane are referred to as "perversions of the conceptional spleen," which "have had the high medico-legal position assigned to them—it is scarcely necessary to add, *erroneously*—of constituting the criteria of insanity," etc., and are subsequently designated as "*faulty ideas growing out of a perversion or weakening of the logical apparatus*, whatever that may be. Later, delusions are subdivided into "*genuine* and *spurious*," of which "the former group consists of those delusions which have been mainly created by the patient himself." The author exemplifies delusion thus: "If, for example, a medical student, as in a reported case, believes that he is suffering from spinal disease, and bases this delusion on alleged symptoms which might justify the belief, if they were not due to illusional misinterpretations and hallucinatory visions of the spinal cord,[1] he is suffering from a *systematized hypochondrical delusion*."

Still later, "the following legal definition of an insane delusion, that it is *a faulty belief, out of which the subject cannot be reasoned by adequate methods for the time being*, is (said to be) a sound one." To what, it may be asked, are these methods *adequate*, since they fail to accomplish their object? This "legal definition" must include all those holding

[1] The definition of this enigma is left to the sagacity of the students and practitioners who may perchance become readers.

religious beliefs (for example), faulty in the estimation of those who oppose them, and out of which they cannot be reasoned by methods adequate in the judgment of the reasoner, but inadequate in that of his subject.

In a subsequent chapter hallucination is defined as "the perception of an object as a real presence, without a real presence to justify the perception." It would be interesting to some, at least, of the "students and practitioners for whose enlightenment this book is written, if the writer had given the distinctive definitions of object and real presence, and had also explained how an object of perception could be other than a real presence.

On the subject of moral insanity the author's expressions are vague and inconclusive, and in relation to the "will in insanity," after advancing the proposition that "there is probably not a single case of insanity in which the will, in the widest sense, is not at some time or other in the course of the illness, more or less disturbed," he proceeds to prove that the will is supreme in its domination over actions instigated by disordered perceptive faculties.

The chapter on "the physical indications of acquired insanity," is marked by ambiguity and inconsistency, which pervades the entire work.

The chapter on "the morbid anatomy of insanity," comprising the writer's observation in this field of investigation, contains matter both interesting and valuable, although its merit is materially diminished by the discredit accorded to the work of others in the same field. Had the observations of the pathological anatomy of insanity, contained in this volume, been published as such, they would have constituted a valuable contribution to the science of psychiatry. But their utilization by means of shallow sophistries, as bases for false psychological theories, couched in ungrammatical jargon unintelligible to any but a polyglot, can serve only to confuse, mislead and discourage those whom it assumes to enlighten and instruct.

The past decade has been most prolific in neurological literature; observers have been industrious in the prosecution of investigations, and perhaps even more so in their publication. It would have been better for their own reputations and for the interests of science, had some of them, at least, been content with the former alone; it would have been better had they known that among many observers there are few thinkers, and very few teachers; that endowment with a reasonable degree of perspicacity for observation of objective phenomena, or even the additional possession of erudition adequate to record them intelligibly, by no means implies ability to estimate their significance, to compare them, nor to deduce logical conclusions from such comparison.

Few minds are trained to so great a degree of accuracy in the performance of secondary or mediate, as of primary or immediate perception, and this organic defect is the source of much, if not of most of the false theory based upon deduction from observed phenomena; hence the great advantage of the classification of intellectual labor—"*suum cuique*;" to some, the task of observation; to others, that of comparison.

FOREIGN CORRESPONDENCE.

LONDON, APRIL, 1884.

Before long, the stronger sex will have to meet the gentler on an equal footing in all the professions. The invasion of women, which is the chief event in recent university history, has advanced another step at Oxford, when congregation agreed by 100 votes against 46 to admit women to several university examinations. The girls will not yet, at least, be examined in the new schools with the undergraduates, but they will have the same papers and the same examiners, and their class lists will be drawn up on the same standard. The lady students at Cambridge have been for some time examined in this way. The opponents of the scheme, however, were divided amongst themselves; some of them arguing that as women were so notoriously inferior to men it would be unkind to subject them to the same examinations, whilst others thought that the change would be unfair to the men, because women were foreordained to be their "helpmates, and not their rivals." There were so many ladies present during the debate that many of the Dons could not gain admission.

The Marine Observatory at Granton, near Edinboro, the first of its kind in Great Britain, is now fairly launched, and will be in working order during the spring. Already many herring, cod, and other living fish are housed in cages for observation. There will be accommodation for six naturalists, and British and foreign observers with some definite object in view will be invited to use the station free. Now it is proposed to erect a marine biological observatory, on the same lines as the one at Naples, on our southern coasts, probably Torquay or Weymouth. A meeting to carry out this object is about to be held at the Royal Society. Professor Huxley will be in the chair.

Mr. William I. Nixon, house governor of the London Hospital, read a paper at the rooms of the Medical Society of London, dealing with the difficulties connected with the administration of the out-door department of our London hospitals. The system has been in vogue for upwards of 140 years, and it is estimated that more than 1,000,000 persons, or one quarter of the population of London, were every year recipients of gratuitous medical aid. His remarks had little bearing upon the care of any but those hospitals which are supported by voluntary contributions. With a view of reducing the difficulty of too great numbers of out-patients without injuring the deserving poor, he thought it desirable that a system of inquiry should be organized. A few leading questions kindly put, not influenced by any set amount of earnings or income which the applicants might be receiving, would elicit the required information. There should be an inspection based on charitable concession. With regard to two methods which had been suggested, and in some cases adopted as remedies, Mr. Nixon considered neither just nor charitable, viz.: payments by out-patients and daily limitation of tickets to patients permitted to pass free. The first was totally unworthy of a great

charity whose existence was established, and whose lease of life was insured by its great value to the community. Charge for advice was unfair to the professional man who gave his services practically free to the institution. Charge for medicine placed the hospital in unworthy competition with the local practitioners, and, however small it might, be was a heavy tax upon the very poor.

A most entertaining volume called the "The Gold-Headed Cane," has just been published. It is edited by Dr. William Monk, F.S.A., Fellow and late Censor of the Royal College of Physicians. Most people who have visited the College of Physicians, have seen there the gold-headed cane which was carried successively by Dr. Radcliffe, Dr. Mead, Dr. Askew, Dr. Pilcairn, and Dr. Baillie, and on the head of the cane are engraved the arms of these famous men. By Dr. Baillie's widow the cane was presented to the college, and the day before the opening of the existing edifice in Pall Mall East, the cane was placed in a cupboard of the library, where it remained for more than half a century. Now it is seen in a glass case in the same apartment. In the delightful book edited by Dr. Monk, the cane is made to tell its own story. In the first five chapters, Dr. MacMichael, some time Registrar of the college, has been the cane's amanuensis. In the second period, the cane, withdrawn from intercourse from the outside world, but present where the weightiest medical matters are discussed, has its comments and meditations chronicled by Dr. Monk. The book is a sparkling epitome of the history of modern medicine. In it one reads of Dr. Radcliffe's medical attendance upon William III, about the Dutch surgeon Bidloo, about Prince Eugene, and Dr. Cheyne, and Sir Hans Sloane, and in fact, about most of the notable people of the eighteenth century. There is also some interesting talk about Dr. Conolly, the compeer of the illustrious Pinel, and who first showed in England the practicability and efficiency of the non-restraint system in lunacy.

Since the decision in the case of Dr. Price that cremation is not illegal in this country, it is proposed that a crematorium in full working order shall be exhibited at the forthcoming National Health Exhibition. The point of such an exhibition would be to familiarize people to the latest results of sanitary science. There is going to be a row of sanitary houses, and a row of unsanitary, facing each other, and it is a pity they cannot also exhibit alongside of the crematorium a section of a cemetery.

The Prince of Wales has just opened the Westminster School and Home for Nurses, an institution for the training of nurses to be employed at discretion, either in hospital nursing, district nursing in poor localities, or nursing in private families. The Prince of Wales mentioned the experience in his own family of how geatly skilful and tender nursing contributes to speedy and satisfactory recovery from illness. The committee hope shortly to have fifty nurses at their disposal, and the institution to be self-supporting. The great number of fatal and serious accidents that have happened during the past season in the foot-ball field, have given rise to a loud cry against the present rules in force in this game. At a late inquiry into the death of a student at the Royal Engineering College, a witness stated that the game was not more dangerous when played according to the Rugby rules than according to those of the Association. It is to be hoped that fresh regulations will be in force before the commencement of a fresh season.

Dr. Barnes is to be congratulated upon having at last prevailed upon the Council of the College of Surgeons to abolish their special license in midwifery and to make it part of their ordinary qualification. Previously, holding only the licentiateship of the College in Midwifery, was sufficient to qualify a person's name being placed on the "Medical Register."

G. O. M.

DOMESTIC CORRESPONDENCE.

FROM WASHINGTON.

MATTERS OF MEDICAL INTEREST BEFORE CONGRESS.—April 21. Under instructions from the Committee on Printing, Representative Scales, of North Carolina, introduced a joint resolution into the House (which was passed) to the following effect:

Whenever the Public Printer shall have received a sufficient number of orders for copies of the reports * * * of the Medical and Surgical History of the Rebellion, * * * accompanied by the cost price thereof, with 10 per cent. additional to warrant, in his opinion, the expense of putting the plates to press, he shall cause an edition or editions thereof to be printed. Provided. That the number of copies thus at any time printed shall not exceed the number ordered and paid for in advance of publication.

April 21. Senator Call, of Florida, submitted a resolution to the Senate (which was agreed to), as follows:

Resolved, That the Committee on Public Printing be directed to report to the Senate the cost of reprinting * * * 10,000 copies of the Army Medical and Surgical History of the War, for the use of the Departments and public libraries, and the two Houses of Congress. Also to report what number, if any, of the volumes of these books are now in possession of the Government for distribution to public libraries.

April 22. The Senate Military Committee reported adversely on Senate Bill 1920, providing for the appointment of Dr. A. P. Frick as an assistant surgeon in the Army. The committee in its report gives the following letter from Surgeon-General Murray, which is heartily endorsed by the Secretary of War in his letter transmitting it to the Senate: "An endeavor to secure through Congressional legislation an appointment in the Medical Department of the Army, setting aside prescribed regulations, establishes a dangerous precedent, and one which is viewed by this office with marked disapproval. The statutes and regulations governing the admission of candidates to the Army Medical Department are the result of the

experience of years, and have been supplied by officers thoroughly conversant with the needs of the service, and have in view the perpetuation of thorough efficiency by the selection of young and vigorous men whose qualifications, both physical and professional, for the positions are rigidly scrutinized by a duly appointed examining board. No departure from the present system or relaxation, conceded to be wise and just, can but result in the demoralization of the department, and is greatly to be deprecated. The employment of doctors known as contract surgeons has heretofore been a matter of pure necessity to supplement the regular corps or to provide medical assistance for U.S. troops in emergencies, when the services of commissioned officers could not be had. As a rule they are not examined by a board as to their qualifications, but are taken upon recommendation, and the length of their service is dependent upon the emergency or circumstance which required their employment. The gradual concentration of army posts renders it now possible to dispense to a great degree with this class of doctors. In the case of Dr. Frick, there is no good reason why he should be preferred over many others who have done good and meritorious service as contract surgeons, and if the precedent is established in his case the result will be similar legislation in many other cases; by which the Medical Department will be filled by men who are rapidly passing the age of efficiency, and who in many cases are unfit for the position by lack of education and professional acquirements."

The Senate adopted the bill (S. 15591; see page 272) to define the titles and duties of officers of the Medical Department of the U.S. Army.

April 25. Mr. Blair, from the Committee on Education and Labor, to whom was referred the bill (S. 1484; see page 272) to provide for the study of physiology, and the effect of intoxicating, narcotic, and poisonous substances upon life, health, and welfare, by the pupils in the public schools of the Territories and the District of Columbia, reported it to the Senate without amendment.

Memorials and petitions from citizens of Connecticut, South Carolina, New Jersey, and Louisville, Kentucky, have been presented in the Senate, protesting against the discriminations now made in the Army, Navy, and Civil Service appointments (excepting the Pension Office) between different schools of medicine.

THE TONER COLLECTION IN THE LIBRARY OF CONGRESS.—This collection, which was donated in 1882, and accepted by a special Act of Congress, May, 1882, from Dr. Joseph Meredith Toner, of this city, consisted of his own private library, embracing over 27,045 volumes of books, besides 12,000 pamphlets and periodicals, and contains much valuable material in the local history of States, counties, and towns, in biography, in medical science, in early imprints, etc. The last report of the Librarian of Congress, Jan. 30, 1884, shows that this donation is still being added to by Dr. Toner to a noteworthy extent; thus, in the past year he has added 470 volumes of books and 3,755 pamphlets, making the figures show 27,515 volumes and 15,755 pamphlets. Among the accessions is an extensive collection of authentic portraits of American physicians and surgeons, including many of early date, which have been fully indexed for ready reference. Mr. Spofford says further—"The frequent calls upon the Toner collection for information upon points of biography and history, as well as medical science, evince the utility of this addition to the stores of the Library of the Government."

EDITOR OF THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION:

In reading the valuable and interesting compilation of reports of cases of hydronephrosis, and tabulation of operations with results, by Dr. G. A. Staples, as published in the issues of April 12 and 19 of your journal, in the report of the interesting case, No. 49, I find two points upon which the report is inaccurate, and desire the privilege of correcting it. Upon page 422 he says: "The affection had been diagnosed by various physicians of St. Paul, St. Louis and Dubuque as tumor of the spleen, phantom tumor, etc. No therapy advised had been of service. Dr. Staples diagnosed hydronephrosis, but his opinion was not sustained by any other surgeon consulted." Lower on the same page he says: "It is proper to add that the increased flow of urine after a 'spell' had not been noticed until Dr. Staples called attention to the fact by his inquiries." As stated, during the twenty years of the existence of this trouble, a number of physicians had been consulted, of whom I was among the earlier ones. I first saw the case in 1867. At that time the attacks were less severe; rest in the recumbent position usually affording prompt relief. In the fall of 1869, the attacks having become more frequent and protracted, my attention was called to the case. After a careful investigation, I was led to believe the trouble involved the kidney. The correctness of this opinion was verified Dec. 11, 1869, when the patient, at my request (previously made) during an attack, allowed it to proceed until the tumor became perceptible, then emptying the bladder as completely as possible, she assumed a position upon her back on a firm surface, with her clothing loosened. She experienced a sense of relief, and upon rising again emptied the bladder in a fresh vessel, voiding a quantity of urine much greater than could have been normally secreted during the time involved. My diagnosis was, "obstruction of the ureter where it leaves the kidney."

I could find no history of hæmaturia or renal colic, yet the fact that assuming the position described above, with the shoulders as low, or lower, than the hips, had often afforded relief, led me to infer it might be due to a smooth calculus closing an enlarged ureter, which would be dislodged by the position described. Upon informing the patient of this diagnosis, I was asked if I could promise them a radical cure. My reply was, "that while I felt confident of being able to afford relief and probably ward off attacks, a radical cure would require an operation involving dangers that were not justified by the case at the time." Because of my unwillingness to assure

definite results, my connection with the case ceased, and it passed into the charge of a prominent homœopath, who, I was informed, diagnosed and treated it as a case of ovarian disease. Subsequently the case was under the care of Dr. N. M. Hill, who, in the spring of 1877, without knowing the details of my diagnosis, made one practically the same, and verified the fact that relief from pain was coincident with an increased flow of urine. Soon after making this diagnosis known, the doctor's services were dispensed with.

The above earlier history of the case having occurred before the writer entered upon the study of his profession, it is not surprising it should have been overlooked in the statement or notes he received from his father, Dr. Geo. M. Staples.

WM. WATSON, M.D.

Dubuque, Iowa, April 23, 1884.

MISCELLANEOUS.

CARPENTER, J. M., M.D., of New Lancaster, Kansas, was born Dec. 17, 1838, in Lockport, New York; died August 8, 1882, aged 44 years. He came to Kansas in 1857; served in the Army during the war of the Rebellion. He commenced the practice of medicine as an under-graduate in 1866, at New Lancaster, and was remarkably successful. He graduated at Miami Medical College, Cincinnati, Ohio, in the winter of 1871–'72; afterwards took post-graduate course at Rush Medical College, Chicago, Ill. He was an energetic worker in the State Society, and had attained an enviable reputation as a surgeon. He was a delegate from the State Society to the American Medical Association in 1878, and again in 1882, at Buffalo, N. Y. He died at New Lancaster, Kansas, universally lamented.

C. V. MOTTRAM.

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NEW BOOKS.

Barnes, R. and F. A System of Obstetric Medicine and Surgery, Theoretical and Clinical, for the Student and the Practitioner. Vol. I, illustrated. 8vo. London: Smith & Co. 18s.

Edgelow, G. Hæmorrhoids and Prolapsus: their Immediate and Painless Cure. 5th edit. London: Eade & Co. 1s.

Heath, C. Injuries and Diseases of the Jaws. 3d edit. 8vo, 472 pp. London: Churchill. 14s.

Latham, P. W. On the Formation of Uric Acid in Animals: its Relation to Gout and Gravel. 8vo London: Bell. 1s 6d.

OFFICIAL LIST OF CHANGES IN THE STATIONS AND DUTIES OF OFFICERS SERVING IN THE MEDICAL DEPARTMENT UNITED STATES ARMY, FROM APRIL 26, 1884, TO MAY 2, 1884.

(Par 2, S. O. 101, A. G. O., May 1, 1884)

Heger, Anthony, Major and Surgeon. From Department of Texas to Department of the East.

Happosett, J. C. G., Major and Surgeon. From Department of Texas to Department of the East.

Bentley, Edwin, Major and Surgeon. From Department of the East to Department of Texas.

Middleton, Passmore, Captain and Assistant-Surgeon. From Department of Texas to Department of Missouri.

Koerper, E. A., Captain and Assistant-Surgeon. From Department of the East to Department of Dakota.

Dickson, J. M., Captain and Assistant-Surgeon. From Department of the East to Department of California.

Girard, A. C., Captain and Assistant-Surgeon. From Department of Dakota to Department of Missouri.

Girard, J. B., Captain and Assistant-Surgeon. From Department of Arizona to Department of the East.

Hall, J. D., Captain and Assistant-Surgeon From Department of Dakota to Department of the Columbia.

Hall, Wm. R., Captain and Assistant-Surgeon. From Department of Missouri to Department of Texas.

Cunningham, T. A., Captain and Assistant-Surgeon. From Department of the East to Department of Missouri.

McCreery, Geo, 1st Lieut and Assistant-Surgeon. From Department of Arizona to Department of Dakota.

Cochran, J. J., 1st Lieut. and Assistant-Surgeon. From Department of Missouri to Department of Arizona.

Shufeldt, Robert W., Captain and Assistant-Surgeon, relieved from temporary duty in Surgeon-General's office and ordered to report to Lieut.-Col Basil Norris, Surgeon U. S. Army, attending surgeon Washington, D. C., for temporary duty in his office. (Par. 6, S. O. 100, A.G O., April 30, 1884)

Barrows, C. C., 1st Lieutenant and Assistant-Surgeon, relieved from duty at Fort Grant, A. T., and ordered to report for duty at Whipple Barracks, A. T., relieving 1st Lieut. W. E. Hopkins, Assistant-Surgeon, who, upon being relieved, will report for duty as post-surgeon at Fort Grant, A. T. (Par. 1, S.O. 31, Hdqrs. Dept. of Arizona, April 21, 1884.)

Phillips, John L, 1st Lieutenant and Assistant-Surgeon (Fort Warren, Mass.), ordered to report for temporary duty to the commanding officer at Fort Preble, Me. (Par. 1, S.O. 81, Hdqrs. Dept. of the East, April 28, 1884.)

Cuyler John W., Colonel and Surgeon, retired, died at Morristown, N. J., April 26, 1884.

LIST OF CHANGES IN THE STATIONS OF MEDICAL OFFICERS, U. S. NAVY, FOR THE WEEK ENDING MAY 3, 1884.

P. A. Surgeon H. P. Harvey, detached from Naval Hospital, Chelsea, and ordered to "St. Mary's"

P. A. Surgeon R. H. McCarthy, ordered to Naval Hospital, Chelsea.

P. A. Surgeon J. R. Waggener, detached from "St. Mary's," and ordered to "Hartford."

Surgeon J. C. Wise, detached from "New Hampshire," and ordered as member of Board of Examiners at Annapolis.

Assistant-Surgeon T. C. Craig, promoted to Passed Assistant-Surgeon.

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